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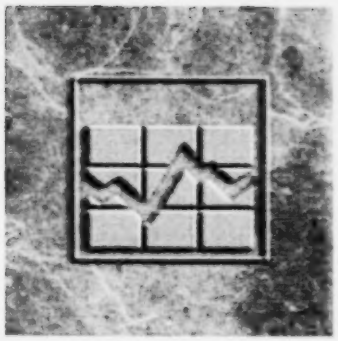
A profile of high-income canadians

1982 to 2004



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Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Abstract

This study uses administrative tax data and the Survey of Financial Security to explore trends in the number and characteristics of high-income Canadians, as well as their wealth and effective income tax rates, from 1982 to 2004. The paper uses a range of thresholds to delineate high income and emphasizes statistics on the top 5%, 1%, 0.1% and 0.01% of tax filers.

The study found that an individual income of $89,000 was needed to be counted among the top 5% if income recipients in 2004. A family income of $154,000 would place one in the top 5% of families. The growth in incomes at the high end has been quite rapid while incomes of the majority of the population remained stable. Compared with the U.S., Canada had significantly fewer high-income recipients in 2004, and their incomes were considerably less. Higher-income individuals tend to be middle-aged married males that live in the larger urban centres. While women have made up a larger portion on the top 5% of tax filers since 1982, they have not made gains in the very highest income groups. High income Canadians have roughly the same share of total wealth as they do of total income.

High income Canadians, in line with an increasing share of total income, have been paying an increasing share of total personal income taxes. Their share of total income increased from 21% to 25% between 1992 and 2004 while their share of income taxes paid increased from 30% to 36%. At the same time, their effective tax rate dropped from 29% to 27%. Thus despite lower tax rates the increase in incomes was large enough, when combined with the progressive tax system, to result in an increased share of total taxes paid by high income Canadians. There is considerable heterogeneity in effective tax rates at the individual level with some high income individuals facing an effective tax rate of over 45%, while some pay as little as 10%. The proportion of tax filers, across the income distribution, who pay zero taxes decreased between 1992 and 2004.

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Introduction

There is a longstanding interest in the prevalence of poverty in society, usually measured in terms of low income. On the other hand, being affluent is not typically seen as a problem. As a result far more effort has been devoted over time and across countries to the measurement and statistical characterization of those with low incomes, than to those with high incomes. Concentration of income and wealth at the high end of the distribution of income can be important as a reflection of the tolerance of increased inequality in Canada and it may help our understanding of changes in policy driven by changes in economic resources.

Canada has a progressive system of taxes and transfers, which means that high-income recipients contribute a disproportionate portion of total taxes, which in turn finance transfer payments to those lower in the income distribution. The health of the high-income population thus can be important to the financing of government activities. Changes to the tax system, of which there have been many in recent years, may affect their behaviour. For example, increasing tax rates have been tied to issues such as the brain drain. The aim in this paper is a descriptive analysis to explore the time trends in the numbers and character of high income Canadians, including their wealth and income tax rates.

There are a number of good studies of the rich and very rich. Recent works by Piketty (2001), Atkinson (2002) and Piketty & Saez (2001), for example, have looked at high incomes in France, Britain and the USA using tax data. Other work by Saez and Veall (2003), and the edited collection by Green and Kesselman (2006), represent important new contributions outlining the income and tax situation of high income Canadians, drawing upon both published and available data sources. Less recently, the work by Murphy, Finnie and Wolfson (1994) used tax data to observe the situation of high-income Ontarians, while Rashid (1991) used 1991 census data to observe high-income Canadians. However, each of these studies covers only selected periods, and omits more recent years.

This analysis starts with the definition of "high-income". The discussion considers a variety of income figures and percentage cut-offs, not least because there is no agreed upon definition of what constitutes a "high income". This situation is similar to the difficulties in defining poverty and low income. One difference is that in the case of low income, there is a large literature discussing such concepts as deprivation and straitened circumstances, and these provide some general support for selecting an income threshold below which one is considered to have "low income". In contrast, there is no such literature for defining the "rich" or those with "high income".

The following sections explore some of the characteristics of those defined as having "high income", drawing mainly on data from tax filers in Canada. The final section examines the income tax rates experienced by persons of differing income levels. The tax filer data offer a unique opportunity for such analysis, especially compared to survey

data. Survey data tend to have very small sample sizes at the upper tail of the income distribution, and also tend to suffer from a higher level of under-reporting.

More specifically, the analysis draws substantially on the T1 Family File (T1FF)[1]. We present findings for both individuals and families. Individuals include all tax filers, with or without income, with the exception of filers who died during the year. Additionally a small number of individuals have been imputed incomes if they were not found in the T1 data but had received an employer submitted T4[2]. These individuals were then grouped into census families by locating the spouses and any dependant children under the age of 25. When results for families are presented in this analysis, the term family includes both families with two or more persons as well as persons not living with other family members[3]. For convenience in terminology, we sometimes refer to this mixture as "families", "family units" or "families and persons not in families".

Where to draw the cut-off? – Definitions

There is no widely accepted definition of "high income". As a result, statisticians and researchers have used a number of thresholds for defining high-income. These various thresholds can be broken down into two broad groupings (just as when defining lower incomes): absolute thresholds, and relative thresholds. In each case, the aim is to describe the upper tail of an income distribution and separate those with higher incomes from those without.

1. Absolute nominal thresholds

Thresholds defined in nominal dollar terms are the simplest way to provide a benchmark for observing how the distribution of incomes in a society shifts over time. Absolute thresholds refer to a particular dollar amount, for example $100,000. Those who earn incomes higher than this figure are considered to have high income, and those who fall below this income are not. However, such a threshold suffers from changing monetary fortunes, most particularly the effect of inflation. What might have seemed a sufficiently large threshold amount one or two decades ago may not be viewed in quite the same respect today, as income levels have risen and earnings have been eroded by inflation.

The most common use of nominal thresholds is for sorting individuals or families into like income groups for presenting statistical results. These levels vary considerably depending on the data source. At the high end, the top threshold found in the Canada Revenue Agency (CRA) Taxation Statistics publication 'Income Statistics' (the so called

1. The T1 Family File is created by Small Area and Administrative Data Division of Statistics Canada, primarily from income tax returns submitted to the Canada Revenue Agency(CRA) and CRA Child Tax Benefit program files. It provides income and limited demographic characteristics of approximately 96% of the Canadian population.
2. Before imputation, the T1 data has had coverage of over 91% each year since the advent of refundable credits – for children in 1978 and for everyone (the GST credit) in 1992. After imputation coverage is roughly 96%.(cf. Patenaude and Clark, 2000).
3. No adjustment has been made for economies of scale or family size through the use of equivalence scales.

Greenbook), for many years has been fixed at $250,000.[4] Somewhat lower is the $150,000 figure used to designate the highest income group in Statistics Canada's Census tables. These thresholds are usually based on statistical judgements relating to accuracy and confidentiality.

Another group of nominal thresholds contain implicit political judgements of what constitutes high income. For example the threshold of $100,000 is used by the province of Ontario in their Public Sector Salary Disclosure Act or "Sunshine List" (Campbell, The Globe and Mail, 1996: A1). Another such threshold would be the level of income above which the top federal rate of tax, or high income surtaxes begin to be paid. This level has varied from as low as about $60,000 in the year 2000 to as high as about $114,000 in 2004. In 2000 the high income surtax kicked in at about $80,000 of total income.

2. Relative thresholds

While absolute nominal thresholds such as $100,000 or $250,000 are easy to understand, they suffer from changing "real" values in the face of inflation. One alternative, as in the case of the income tax bracket thresholds, is to index to the CPI, which maintains their value whatever the rate of inflation. However, as in the longstanding discussion of relative versus absolute poverty or low income lines, there is a parallel argument that high income ought to be defined in a relative manner. According to this argument, when the income of an average worker rises (due to real per capita economic growth, not just because of inflation), the threshold for "high income" ought to rise in parallel. A relative threshold would divide an income distribution using a quantile cut-point threshold to differentiate between those with higher incomes, and those without[5].

In a study that explicitly considered the definition of high income, Murphy, Finnie and Wolfson (1994) used the top 5% of the income distribution or about three times the median income as the definition of high income. Other studies with differing data and objectives have used different relative thresholds including the top third or 33.3% (Morissette and Ostrovsky, 2005), the top fifth or 20% (e.g. Morissette and Zhang, 2006), the top 5% threshold, (e.g. Frenette, Green and Picot, 2004; Atkinson, 2003), and lastly, the top 1% (e.g. Rashid, 1994).

4. Each year the CRA publishes Income Statistics detailing tax statistics for the population of tax filers, commonly referred to as the "Greenbook." This publication, now available electronically, provides a large amount of information regarding the level of income, sources and taxes paid by Canadians. The $250,000 income level is not selected to conform to any particular governmental policy or regulation, but rather is chosen simply to represent a convenient measure of the highest level of income.

5. These quantile cut points are typically expressed in terms of percentiles, quartiles, quintiles, deciles etc. An alternative relative threshold would be a level expressed as a multiple of a quantile, such as ten times the median for a high income threshold, and the much more common half median used as a cut-point for demarcating low income.

Table 1 Absolute and relative total income thresholds of individuals, and of families and non-family persons, Canada, 2004

	Individuals		Families and non-family persons	
	Income recipients above cut-off	Cut-off dollar threshold	Income recipients above cut-off	Cut-off dollar threshold
	percentage	dollar	percentage	dollar
Absolute thresholds				
CRA greenbook	0.6	250,000	1.5	250,000
Census tables	1.4	150,000	5.4	150,000
Ontario "Sunshine list"	3.7	100,000	15.3	100,000
Top federal tax rate 29%	2.4	113,804	11.3	113,804
Relative thresholds				
Three times median	8.1	75,000	8.2	129,000
Top third 33.3%	33.3	37,000	33.3	64,000
Top quintile 20%	20.0	50,000	20.0	88,000
Top decile 10%	10.0	69,000	10.0	119,000
Top 5%	5.0	89,000	5.0	154,000
Top 1%	1.0	181,000	1.0	305,000

Source: Statistics Canada, T1 Family File (T1FF).

Table 1 shows several absolute and relative thresholds as well as the percent of individuals or families that would be considered as having high incomes.[6] Not surprisingly, there is substantial variability in the threshold levels. For example, for individuals in 2004, both an income as low as $37,000 and an income as high as $181,000 have been labelled 'high income'. Families have been labelled 'high income' with incomes ranging from $64,000 to $305,000.

What we find from this analysis is that the different thresholds produce quite varying pictures of those income tax filers that would fall into the high income category. In other words, the line you choose will affect the size of the high income population. Given the essential arbitrariness of any specific choice, our analysis will use a range of thresholds to demarcate those with "high income". However, our predominant focus is on relative thresholds, and generally those involving the top 10% of the population or less.

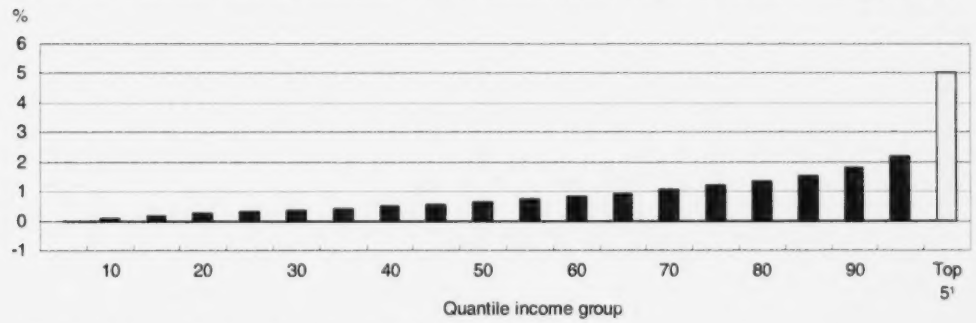
6. The T1 Family File (T1FF) data can show information for the population of individual tax filers, or for families and non-family persons in Canada. For this study, the data for each of these two groups is ordered from lowest to highest total income, and then divided into 10,000 equally sized groups or quantiles, with corresponding dollar income thresholds for each quantile. The total income associated with the change from one quantile to the next provides the dollar figure used to determine the value of any particular threshold. Except where noted T1FF income figures include total capital gains and RRSP withdrawals.

What is high income?

A famous parable that illustrates the pattern and magnitude of various income levels was Jan Pen's "Parade of Dwarfs (and a Few Giants)" (Pen, 1971). In this parable, everyone in the country lined up in a parade that was timed to pass in front of the reviewing stand over a period of exactly one hour. People were lined up in order of their incomes, and their statures were magically adjusted to be proportional to their income, with persons with an average income remaining at average height.

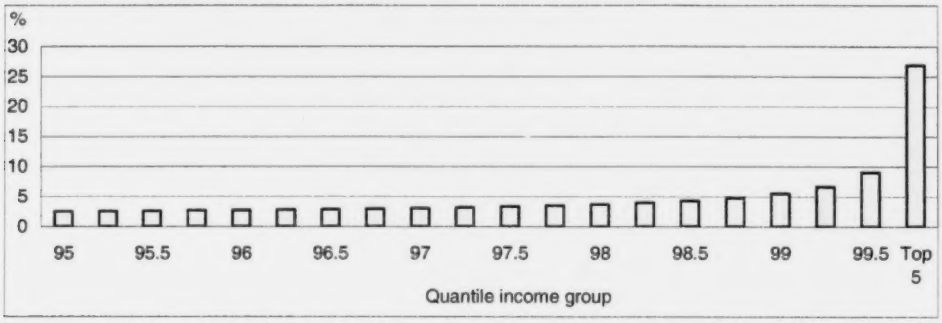
Figure 1 shows Canadian income data from 2004 corresponding to Pen's parade. Interestingly, a person with the average income would not pass the reviewing stand until well after the 30 minute mark, since the graph shows that the first bar with a height bigger than one is the 70-75th percentile – corresponding to a timing of 40 or so minutes into the one hour parade. At about the 54 minute mark, the individuals passing by would be about twice the normal height (in the 90-95th percentile). At 59 minutes, those passing by would be about five times normal height (99th percentile), while in the final 9 seconds (top 0.25%), the individuals would be more than 27 times the average, and in the last fraction of a second (top 0.01%) the giants passing by would be over 165 times the height of the average person.

Figure 1a Relative mean incomes by percentile group, all tax filers Canada, 2004



1. See chart 1b for more details on "top 5 percent of filers".

Figure 1b Relative mean incomes by percentile group, top 5 percent of filers, Canada, 2004



Source: Special tabulations, T1FF file.

Pen's parade illustrates the basic structure of how incomes are distributed in Canada and this structure is similar at ever higher levels of income. The top 5% of income tax filers (Figure 1b) show the same pattern with mostly dwarves and a few giants. The top 0.25% of income tax filers have average incomes 25 times the all Canada mean. However this top 0.25% group is also five times higher than the mean of the top 5% of filers.

This distribution, while slow moving does change over time. Table 2 shows the dollar values of the thresholds or cut points for a wide range of percentiles spanning the income distribution of Canadian tax filers in each of three years, 1982, 1992 and 2004. Two sets of distributions have been tabulated – one set for individuals, on the left side of the table, the other for nuclear families plus all non-family persons combined ("family units" for short) on the right. All dollar amounts are in 2004 dollars, updated using the CPI. The three years chosen are somewhat arbitrary in that they allow the longest possible comparison of ten year intervals.[7]

7. Practical considerations precluded examining all years. This period includes two recessions and two periods of rapid economic growth. We have examined the shares of the top filers for all years and found that 1982 and 1992 are not exceptional years for purposes of inequality trend analysis of high incomes, notwithstanding the changes in the macro economic context.

Table 2 Total income thresholds of individuals, and of families & non-family persons, various percentiles, Canada, 1982, 1992 and 2004

	Individuals			Families and non-family persons		
	Total income dollar threshold cut-off			Total income dollar threshold cut-off		
	1982	1992	2004	1982	1992	2004
	thousands of dollars			thousands of dollars		
Percentiles						
Bottom 1	0	0	0	0	1	0
Bottom 5	0	2	1	3	7	7
10	2	5	5	9	11	11
20	8	10	10	17	16	17
25	11	12	12	21	20	21
40	19	18	19	33	31	33
50	25	23	25	42	39	43
60	31	30	31	51	49	55
75	44	42	44	69	69	77
80	49	47	50	76	77	88
90	64	63	69	99	102	119
Top 5	80	78	89	123	128	154
Top 1	142	139	181	210	220	305
Top 0.1	383	402	648	546	597	1,045
Top 0.01	1,360	1,319	2,833	1,781	1,949	4,301

0 true zero or a value rounded to zero

Note: Figures are rounded constant 2004 dollars.

Source: Statistics Canada, T1 Family File (T1FF).

Most striking in these figures, on the one hand, is the general stability in the cut points up to and including the 80th percentile for individuals, and up to the median (i.e. 50th percentile) for families and non-family persons. On the other hand, those in the top 1% and smaller groups experienced major increases, much more so from 1992 to 2004 than in the previous decade.

For example, for the bottom half of individual income tax filers the real dollar threshold was essentially flat at $25,000 in 1982 and in 2004, while for families and non-family persons the 50% threshold increased marginally from $42,000 to $43,000. Some large increases did occur in the lowest income thresholds but are not the focus of this study. The threshold dividing the bottom 10% of individual income tax filers, for example, increased in real dollars from approximately $2,000 in 1982, to $5,000 by 2004. The corresponding change for the bottom 10% of families and non-family persons was from $9,000 to $11,000 over the same period.

By contrast, if an individual had wanted to get into the highest quantiles during this period, they would have found it a dramatically more expensive proposition. For example, the income threshold for individuals in the top 5% increased from $80,000 in 1982 to $89,000 by 2004. While the top 0.01% income threshold for individuals more than doubled from $1,360,000 to $2,833,000 over the same period. Similar changes occurred for families over this time.

Table 3 Total income threshold as a percent of median income, for individuals and family and persons not in families, Canada, 1982, 1992 and 2004

	Individuals			Families and non-family persons		
	Total income cut-off as proportion of median			Total income cut-off as proportion of median		
	1982	1992	2004	1982	1992	2004
	percentage			percentage		
Percentiles						
25	44	51	48	50	50	49
50	100	100	100	100	100	100
75	177	180	181	163	174	180
90	258	273	282	235	258	277
Top 5	322	339	364	294	324	358
Top 1	572	601	737	501	558	707
Top 0.1	1,544	1,743	2,644	1,301	1,511	2,425
Top 0.01	5,475	5,723	11,552	4,243	4,934	9,976

Source: Statistics Canada, T1 Family File (T1FF).

One way of reflecting the magnitude of these constant dollar changes is to compare these incomes to the median income threshold (Table 3). What we find is that the highest percentile of income earners, whether individuals or families and non-family persons, experienced very high growth relative to the median income thresholds from 1982 to 2004. In 1982, the top 5% of individual incomes were just 3.2 times larger than the corresponding median. By 2004, this had increased to 3.6 times. A similarly change is observed for families and non-family persons over the same period.

These changes were more dramatic for the very highest quantile income thresholds. In 1982, the top 0.01% percentile income threshold for individuals was almost 55 times larger than the median income. By 2004, this top income threshold for individuals was over 115 times the size of the median threshold, more than double the earlier comparison. For families and non-family persons the pattern is the same. The top 0.01% income threshold was approximately 42 times the size of the median income threshold. This had more than doubled to 100 times by 2004.

Table 4 Mean incomes by percentile income group, Canada, 1982, 1992 and 2004

	Individuals			Families and non-family persons		
	Average total income			Average total income		
	1982	1992	2004	1982	1992	2004
	thousands of dollars			thousands of dollars		
Percentiles						
Bottom 5	-90	0	0	-12	2	2
Bottom 10	-5	2	2	-1	6	6
Bottom 20	2	5	5	6	10	10
20 to 40	14	14	14	25	23	25
40 to 60	25	23	25	42	40	43
60 to 80	40	37	40	63	62	70
Top 20	79	77	93	120	124	158
Top 10	102	100	128	153	160	215
Top 5	133	130	178	197	206	296
Top 1	269	268	429	380	404	684
Top 0.1	852	822	1,641	1,143	1,196	2,493
Top 0.01	2,903	2,547	5,920	3,658	3,490	8,443

0 true zero or a value rounded to zero

Note: Figures are rounded constant 2004 dollars.

Source: Statistics Canada, T1 Family File (T1FF).

Threshold income values, both in constant dollars (Table 2) and as proportions of the median (Table 3), can in some instances understate the magnitude of changes in the income distribution. Table 4 shows the average incomes for individuals and family units within particular quantiles. For example, the constant dollar threshold for the top 5 percent of individual filers increased by 11.3%, while that of families increased by 25.2% from 1982 to 2004 (Table 2), while the increases in these thresholds as proportions of their respective medians were 13.0% and 21.8% (Table 3). In comparison, the change in the average income of the top 5% of individuals was much larger, from $133,000 in 1982 to $178,000 in 2004, representing an increase of over 33% (Table 4). Similarly, the average real income among the top 5% of family units increased by over 50% from 1982 to 2004 (Table 4).

These increases, for the most part, were not paralleled by individuals and families in the lower and middle parts of the income spectrum. Individuals with incomes in the first four quintiles (bottom four-fifths), for example, experienced little or no real increase in mean income over the period from 1982 to 2004. Families and non-family persons in the first and fourth quintiles did have some real income growth during this time, but for those in the second and third quintiles, there was little to no change. The increases in average incomes that did occur were generally limited to the top quintile, and were increasingly marked the higher one went into the upper tail of the income distribution.

Table 5 Vingtile and quantile shares of total income, Canada 1982, 1992 and 2004

	Individuals			Families		
	1982	1992	2004	1982	1992	2004
	percentage			percentage		
Vingtiles						
1	-1.0	-0.1	0.0	-0.8	0.2	0.2
2	0.1	0.6	0.4	0.6	0.9	0.7
3	0.6	1.0	0.9	1.1	1.2	1.1
4	1.1	1.4	1.2	1.5	1.5	1.3
5	1.5	1.7	1.5	1.9	1.7	1.6
6	1.9	2.0	1.8	2.3	2.1	1.9
7	2.3	2.3	2.1	2.6	2.4	2.2
8	2.8	2.7	2.5	3.0	2.8	2.6
9	3.2	3.0	2.8	3.5	3.2	2.9
10	3.7	3.5	3.2	3.9	3.6	3.3
11	4.2	3.9	3.7	4.3	4.0	3.7
12	4.7	4.5	4.2	4.8	4.5	4.2
13	5.2	5.0	4.7	5.3	5.0	4.7
14	5.9	5.6	5.3	5.8	5.6	5.3
15	6.6	6.3	5.9	6.4	6.3	6.0
16	7.3	7.1	6.7	7.1	7.0	6.7
17	8.2	8.0	7.7	7.9	7.9	7.7
18	9.4	9.3	9.0	9.0	9.1	8.9
19	11.2	11.2	11.0	10.7	10.9	11.0
20	21.0	20.9	25.3	19.3	19.9	24.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Percentilles						
Bottom 95	79.0	79.1	74.7	80.7	80.1	75.9
Bottom 90	67.8	67.9	63.7	70.0	69.1	64.9
Top 10	32.2	32.1	36.3	30.0	30.9	35.1
Top 5	21.0	20.9	25.3	19.3	19.9	24.1
Top 1	8.5	8.6	12.2	7.4	7.8	11.2
Top 0.1	2.7	2.6	4.7	2.2	2.3	4.1
Top 0.01	0.9	0.8	1.7	0.7	0.7	1.4

0 true zero or a value rounded to zero

Note: Total income includes capital gains and RRSP income.

Source: Statistics Canada, T1 Family File (T1FF).

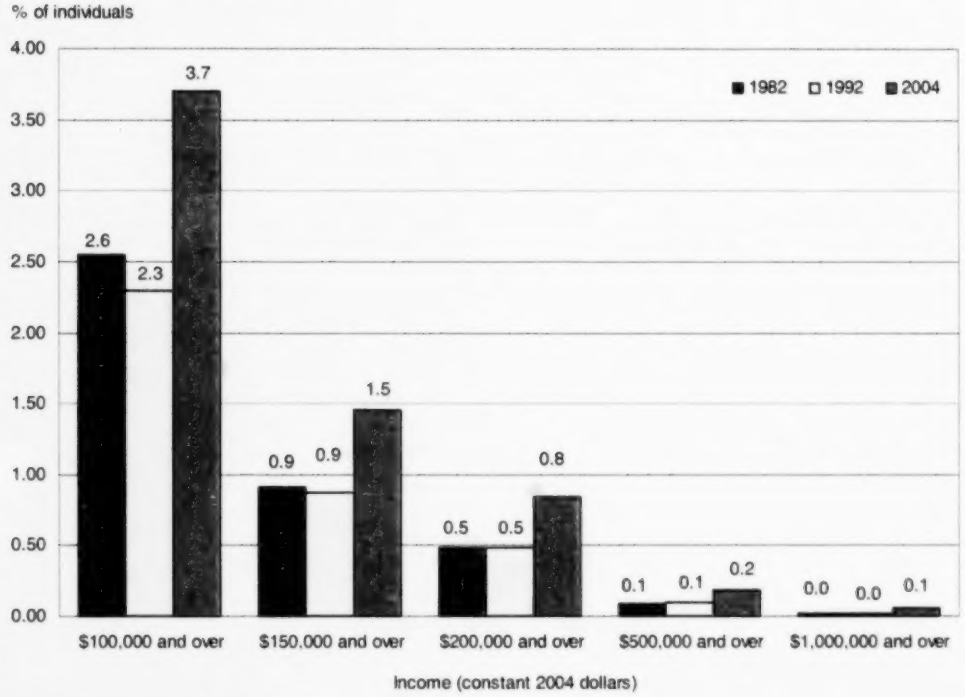
Yet another way to display these income distribution trends is as shares of income accruing to various income groups. The top portion of Table 5 shows these shares for each of the twenty equal-sized vingtile groups (each comprising five percent of the population). The bottom portion of Table 5 breaks out the upper tail of the distribution more finely. Whether one talks of the bottom 90% or the bottom 95%, and examines either individuals or family units, their shares of the income pie decreased, especially in the second period from 1992 to 2004. In contrast, the share of the top 5% increased by about one-quarter, while that of the top 1% increased by about half, and that of the top 0.1% and 0.01% came close to doubling. For example, the top 0.01 of individual income tax filers accrued 0.8% of all income in 1982 and in 1992, but by 2004, this share had grown to 1.7%.

More high income people or not?

To this point we have focused attention on levels and shares of aggregate income accruing to a population defined by a relative threshold (i.e. the top 5%). By this definition the number of high income people will increase only if the total population increases and it will increase by the overall growth rate regardless of threshold. By using an absolute set of thresholds we can give some indication of whether the relative numbers of high income individuals and families have increased or decreased above fixed dollar thresholds.

So, have the number of high income individuals or families increased over time? Or, is it the case that the top 5% accrued a greater share of aggregate total income without there being a corresponding proportional increase in the number of individuals and families above various absolute dollar high-income thresholds?

Figure 2 Proportion of individual income tax filers by total income group, Canada 1982, 1992 and 2004

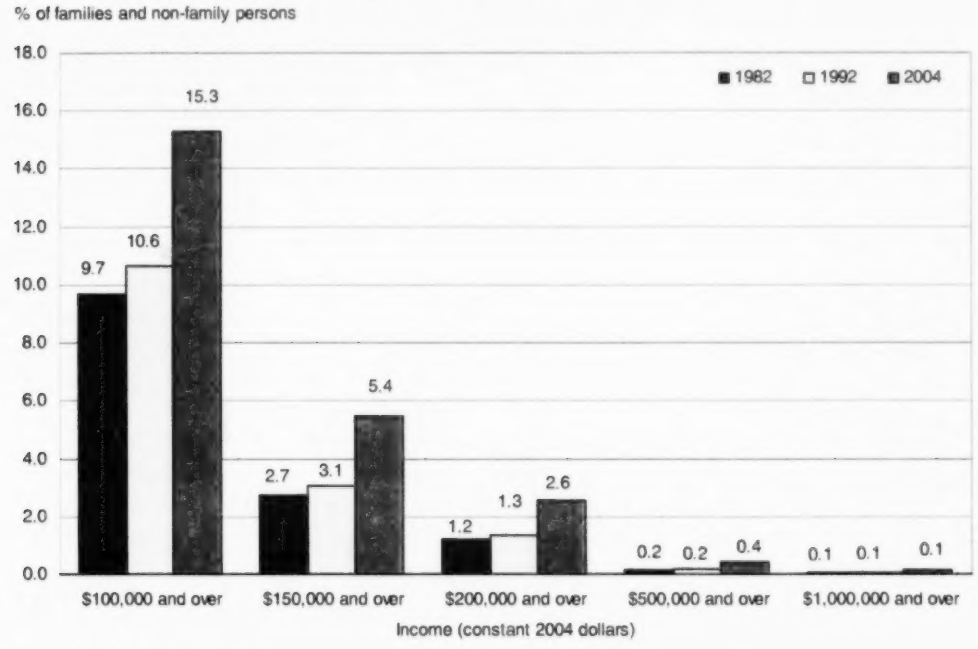


Source: Special tabulations, T1FF file.

Figure 2 shows that the proportion of high income individuals (over a number of constant dollar thresholds) were the same or slightly lower in 1992 than in 1982, but by 2004 had increased considerably. The total proportion of individual income tax filers earning over $100,000 in 1982 was approximately 2.6%, falling to 2.3% in 1992 before climbing to 3.7% in 2004. In 2004, there was a general increase in the proportion of individuals

earning an income equal to or greater than each selected income threshold. Not only has the size of the aggregate total income share accruing to the top 5% of individual income tax filers grown, but so too have the number of high income earners. A similar change is observed for families (Figure 3), with the proportion of families earning over $500,000 more than doubling over the period.

Figure 3 Proportion of total family and non-family person income tax filers by total income group, Canada 1982, 1992 and 2004



Source: Special tabulations, T1FF file.

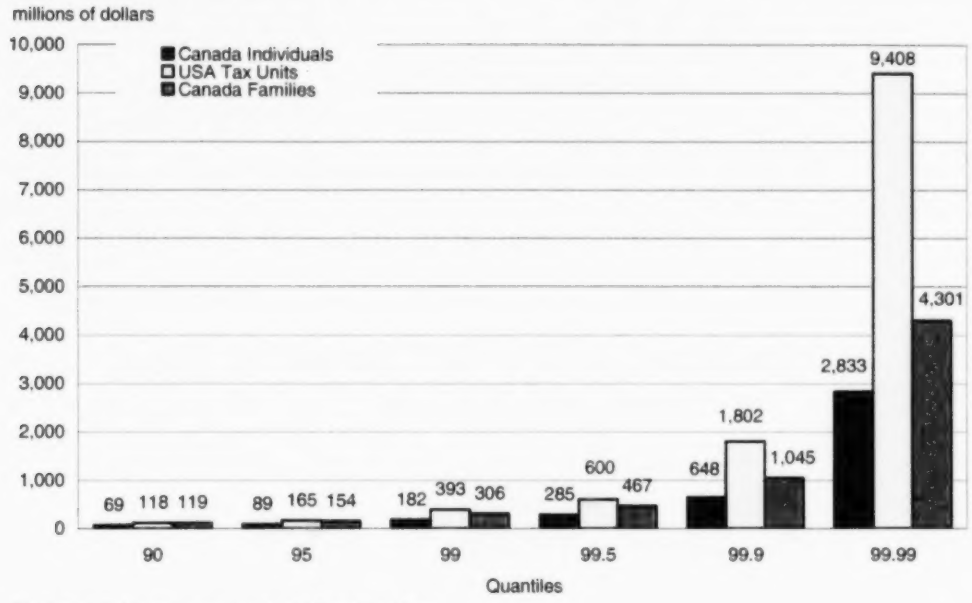
From 1982 to 2004, the proportion of the aggregate income "pie" accruing to the top of the income distribution increased (Table 5). We now know that this increase did not simply go to the same number of rich individuals and families. Instead, the absolute proportion of high income individuals and families also increased during this period. There are more high income Canadians in 2004 than there were in 1992.

Comparing high income in Canada and the USA

Comparisons between Canada and the USA are made on a continual basis, for everything from the cost of gasoline and housing, to the incomes of physicians and corporate executives. Involved in each of these discussions is the issue of income. Just how do high incomes in Canada compare to those found in the USA? Comparing the Canadian

data to USA total income[8] data (Saez, 2007) we explore the threshold income figures and the average incomes of quantile groups in both the USA and Canada in 2004. The US data has been adjusted into comparable Canadian dollar figures using purchasing power parity (PPP) figures from Statistics Canada (Temple, 2007).

Figure 4 Total income quantile thresholds, Canada and the U.S.A., 2004



Note: Purchasing power parity adjusted Canadian dollars.

Source: Canada – Special tabulations, T1FF file and U.S.A. – Saez (2007).

Figure 4 displays income threshold figures by quantile groups for Canada and the USA, while Figure 5 shows the average incomes (including capital gains) within a series of quantile groups. There are three bars for each income group, one for Canadian individuals, one for Canadian families and a third for US tax units. The three results are presented because US filers are permitted to elect between joint filing or filing separately as individuals. The Canadian T1FF is created by matching all individual filers to their spouses and dependants. Thus while the US data is closer to the Canadian family definition the individual taxfiler population is also a useful reference point.

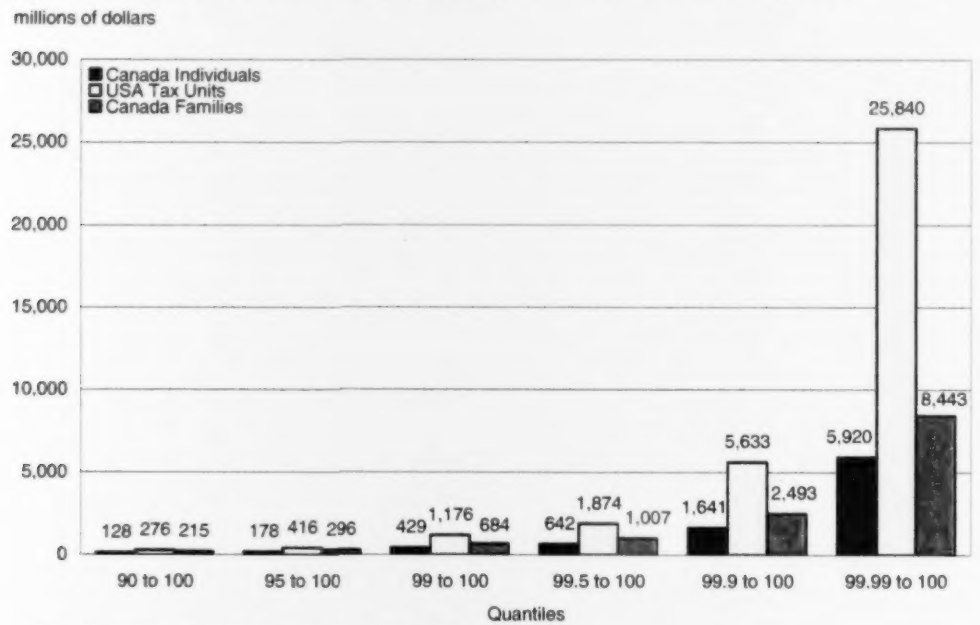
The most striking aspect of these charts is the increasing divergence as one moves from the 90th percentile to the 99.99th percentile threshold, or top 10 percent to top 0.01 percent groups. Individuals in the top 5% of income tax filers in 2004 had an income of $89,000 while families had an income of $154,000. The corresponding 5% income threshold for USA families is slightly higher at $165,000. As one moves further up the income

8. For the USA income figures reported here, Saez (2007) defines income as annual gross income reported on individual tax returns including capital gains but excluding all government transfers (such as Social Security, Unemployment Benefits, Welfare Payments, etc.) and before individual income taxes and employees' payroll taxes.

distribution, the thresholds in the USA grow considerably larger compared to Canada. The income threshold for the top 0.01% in Canada is approximately $4.3 million, less than half the $9.4 million threshold in the USA.

However, these differences pale when compared to average total income. The average income for families in the top 5% of income tax filers in Canada in 2004 was $296,000, while the corresponding figure in the USA is over 70 percent larger at $416,000. The difference between the Canadian and USA average incomes grows even larger the higher one goes up the income distribution. For the top 0.01% of families, the average income earned in the USA ($25.8 million) is over 3 times the corresponding average income in Canada ($8.4 million, approximately). These differences between the Canadian and USA average income figures are larger than those observed between Canadian and USA income thresholds again reflecting the highly skewed distribution of income in both Countries.

Figure 5 Average total income by quantile, Canada and the U.S.A., 2004



Note: Purchasing power parity adjusted Canadian dollars.

Source: Canada – Special tabulations, T1FF file and U.S.A. – Saez (2007).

Sources of income for high income individuals and families

From 1946 to 2000, those with the highest incomes saw their main sources of income change (Saez and Veall 2003). High income individuals in the 1940s relied upon a combination of wage, capital (dividends, investments and interest) and entrepreneurial (self-employed professionals and sole proprietorship owners) sources to obtain their income. For those with the very highest incomes (Top 0.1% and Top 0.01%), however, wage income was relatively less important. By the 1990s, wages and salaries had become increasingly more important sources of income for all individuals in high income, while income from capital and entrepreneurial sources became less important.

Table 6 Distribution of selected income sources by income quantile for individuals, Canada 1982, 1992 and 2004

Quantile group / Income sources of individuals	1982	1992	2004
	percentage		
Bottom 0 to 95			
Employment	90.0	90.7	95.0
Investment total (including interest and dividends)	9.8	8.0	3.8
Capital gains (total gains, not just taxable)	0.2	1.3	1.2
Total	100.0	100.0	100.0
Top 5			
Employment	72.0	75.6	82.5
Investment total (including interest and dividends)	23.9	10.8	7.7
Capital gains (total gains, not just taxable)	4.1	13.6	9.7
Total	100.0	100.0	100.0
Top 1			
Employment	58.8	62.3	74.4
Investment total (including interest and dividends)	33.0	14.3	10.2
Capital gains (total gains, not just taxable)	8.3	23.4	15.3
Total	100.0	100.0	100.0
Top 0.1			
Employment	46.5	51.6	67.4
Investment total (including interest and dividends)	38.4	17.2	12.5
Capital gains (total gains, not just taxable)	15.1	31.3	20.1
Total	100.0	100.0	100.0
Top 0.01			
Employment	36.1	58.2	61.6
Investment total (including interest and dividends)	42.9	21.8	14.2
Capital gains (total gains, not just taxable)	21.0	20.0	24.2
Total	100.0	100.0	100.0

Source: Statistics Canada, T1 Family File (T1FF).

Our data focuses on three main components of income for high income individuals (Table 6) – employment income (wages and self-employment), investment income excluding capital gains (dividends, investments and interest) and capital gains income (total gains)[9]. We see that from 1982 to 2004, non-high-income individuals and families (bottom 95% of the income distribution) experienced an increase in the proportion of income obtained from employment relative to the other two income components from

9. This analysis of income sources, following Saez and Veall (2003: 39), does not include other income components such as alimony, taxable social security benefits, taxable unemployment insurance benefits, etc. These other sources are less important components of income for high income individuals. Our total income variable, though, does include all of these sources.

90.0% to 95.0%. Over the same period, investment income became less important, while capital gains income remained a relatively unimportant source. A similar relationship is seen for the bottom 95% of families.

Meanwhile, the highest income individuals and families increased the proportion of their income from employment at a considerably faster rate from 1982 to 2004 – the top 1% of individuals from 58.8% to 74.4% and the top 0.01% from 36.1% to 61.6%. Similarly, these two groups of individuals saw an increase in capital gains income – the top 1% of individuals from 8.3% to 15.3% and the top 0.01% from 21.0% to 24.2%. Correspondingly, both groups experienced decreases in the proportion of non-capital gains investment income – the top 1% of individuals from 33.0% to only 10.2% and the top 0.01% from 42.9% to just 14.2%. Similar patterns occurred for families.

Who has high income?

Levels and changes in income thresholds, income shares and average income levels are fundamental to a broad understanding of the extent of high income in Canada. In this section, we turn to the question of the characteristics of those with high incomes in Canada in 2004. We examine those with high incomes, observing the relative differences to those with lower income, including where they live, how they earn their income and the forms of assets and wealth they possess.

Table 7 Distribution of individual tax filers by quantile income group, gender, age, province and marital status, Canada, 2004

	Quantile income groups					
	All filers	Bottom 95	Top 5	Top1	Top 0.1	Top 0.01
Number of filers	23,438,000	22,253,000	1,186,000	237,000	24,000	2,000
			percentage			
Males	48.3	46.8	75.7	78.8	84.3	88.7
Females	51.7	53.2	24.3	21.2	15.7	11.3
0 to 24	13.0	13.7	0.3	0.3	x	x
25 to 44	36.9	37.0	35.2	28.8	x	x
45 to 64	32.9	31.7	54.1	56.3	59.7	59.1
65 and more	17.3	17.6	10.4	14.6	18.1	22.6
Newfoundland	1.7	1.7	0.8	0.7	x	x
Prince Edward Island	0.4	0.5	0.2	0.2	x	x
Nova Scotia	3.0	3.0	1.8	1.7	1.2	x
New Brunswick	2.4	2.5	1.2	1.0	x	x
Quebec	24.6	25.0	17.6	17.9	13.2	10.1
Ontario	37.9	37.5	46.2	47.1	50.4	51.1
Manitoba	3.6	3.7	2.3	2.1	1.7	x
Saskatchewan	3.0	3.1	2.0	1.8	1.2	x
Alberta	10.0	9.8	14.7	15.1	18.7	23.3
British Columbia	13.0	13.0	12.6	12.4	12.5	11.5
Single	43.4	44.5	21.8	19.4	17.1	17.3
Married	56.6	55.5	78.2	80.6	82.9	82.7

x suppressed to meet the confidentiality requirements of the *Statistics Act*

Source: Statistics Canada, T1 Family File (T1FF).

The composition of those with high-incomes is quite different from the overall population of tax filers (Table 7). Of the approximately 1.2 million individuals in Canada in the top 5% of income tax filers, three out of every four were male (75.7%), despite males being a minority of individual income tax filers in general (48.3%).[10] Female individual tax filers, while comprising over half of the population of individual income tax filers in 2004 (51.7%), represented just 24.3% of those in the top 5%. This relationship becomes even more skewed the higher one proceeds up the income distribution. About one in nine individuals in the top 0.01% of income tax filers is female (11.3%). Since 1982, the proportion of females in the top 5% increased from 13.3% to 24.3% and their representation in the top 1% increased from 13.1% to 21.2%, however their share of the top 0.01% group declined slightly.

The prevalence of high incomes peaks in the pre-retirement years. People aged 45 to 64 years in 2004 represented less than a third of individual income earners (32.9%), but were the majority of top 5% individuals (54.1%). If we concentrate on just the highest income levels (top 0.01%) those aged 45 to 64 years in 2004 composed three out of every five high-income individuals. Interestingly, those aged 25 to 44 years are the second largest group of high-income individuals at the top 5% of income earners, however at the highest income levels (top 0.01%) they have been replaced by seniors as the second largest group (22.6%).

Almost half (46.2%) of all high income individuals (top 5%) live in Ontario, followed distantly by Quebec (17.6%), Alberta (14.7%) and British Columbia (12.6%) – a total of 91.1% of all high income tax filers. However, as we have seen with gender and age, some of these figures change the higher we move up the income distribution. Of the top 0.01% of individual income earners, the second largest provincial group is now Alberta at 23.3%, while just 10.1% are from Quebec (now the fourth largest group). In terms of marital status, over three-quarters (78.2%) of all high income individuals are married, increasing to 82.7% for the top 0.01% of earners.

To be a high income tax filer in Canada, therefore, is generally to be male, aged 45 to 64 years, living in one of the largest provinces (likely Ontario, and to a lesser degree Quebec, Alberta or B.C.), and to be married. This changes somewhat when observing the highest incomes (top 0.01%) where being a senior (65 years and over) or living in Alberta becomes more likely. Equally interesting is to observe who tends to be absent from high incomes – females, younger people, those living in smaller provinces and single people.

Earlier we discussed how income thresholds and average income for particular parts of the income distribution have changed over time, particularly for individuals in the higher incomes (Tables 2 and 4). How have the income changes from 1992 to 2004 affected particular demographic groups? Observing the change in aggregate total income by

10. Income quantile groups in this table are based on the T1FF individual filer population for Canada in 2004.

demographic group for all filers from 1992 to 2004,[11] we find that overall each demographic group experienced real increases in their constant dollar aggregate total incomes (Table 8). Some groups experienced much larger changes, such as all individuals aged 45 to 64 years and all persons living in Alberta, both of which experienced increases of approximately 60% in their real aggregate income (ratio of 1.6 in Table 8).

Focusing only on the changes in aggregate income for all tax filers, we find that each demographic group experienced some change over the period from 1992 to 2004. Some demographic groups experienced smaller changes in aggregate income, such as younger individuals (0 to 24, and 25 to 44 years) and those living in the Atlantic provinces or Saskatchewan and Manitoba, while others experienced a greater degree, such as those aged 45 to 64 years old, and people living in Alberta.

While there was little overall change for many of the demographic groups, the amount of change occurring depended on the particular quantile income group in which a tax filer was located. For example, the bottom 95% of individuals aged 25 to 44 years old experienced no change (ratio of 1.0) in aggregate total income from 1992 to 2004, but the top 5% of individual income tax filers aged 25 to 44 years old, experienced an increase of approximately 30% (ratio of 1.3) over the same period. The increase was even more obvious in the top 0.01% of 25 to 44 year old income tax filers, where aggregate total income more than doubled (ratio of 2.1) during the same period.

11. The change in aggregate income is represented by a ratio of aggregate total income in 2004 divided by aggregate total income in 1992. A ratio of 1.0 represents no change, a ratio larger than 1.0 represents an increase in aggregate total income, while a ratio less than 1.0 represents a decrease.

Table 8 Proportionate increase in constant dollar aggregate total income of individual tax filers from 1992 to 2004 by quantile income group, gender, age, province and marital status, Canada

	Quantile income groups					
	All filers	Bottom 95	Top 5	Top1	Top 0.1	Top 0.01
	ratios					
All filers	1.3	1.2	1.5	1.8	2.3	2.6
Males	1.2	1.2	1.5	1.7	2.2	2.5
Females	1.3	1.3	1.9	2.3	2.6	3.4
0 to 24	1.1	1.1	1.8	1.8	X	X
25 to 44	1.1	1.0	1.3	1.6	X	X
45 to 64	1.7	1.6	1.8	2.0	2.5	2.9
65 and more	1.2	1.1	1.4	1.6	1.9	2.3
Newfoundland	1.1	1.1	1.4	1.6	X	X
Prince Edward Island	1.2	1.2	1.3	1.2	X	X
Nova Scotia	1.1	1.1	1.4	1.5	1.8	X
New Brunswick	1.1	1.1	1.3	1.4	X	X
Quebec	1.2	1.2	1.4	1.7	2.4	3.8
Ontario	1.3	1.2	1.5	1.7	2.0	2.2
Manitoba	1.1	1.1	1.4	1.6	2.1	X
Saskatchewan	1.1	1.1	1.4	1.6	2.0	1.6
Alberta	1.6	1.4	2.4	3.1	4.4	5.6
British Columbia	1.2	1.2	1.3	1.4	1.6	1.9
Single	1.3	1.2	1.6	2.0	2.5	3.2
Married	1.3	1.2	1.5	1.8	2.2	2.5

0 true zero or a value rounded to zero

x suppressed to meet the confidentiality requirements of the *Statistics Act*

Source: Statistics Canada, T1 Family File (T1FF).

Overall, individuals in the highest income ranges (Table 8) experienced the largest changes in aggregate total income from 1992 to 2004. High-income individuals in Alberta experienced aggregate income changes that more than doubled the size of aggregate income from 1992 to 2004 (ratio of 2.4). For the very highest income tax filers in Alberta (top 0.01), aggregate income increased by a ratio of 5.6 over this period. Other top income groups (top 0.01) that experienced large increases include males and females, with females in the top 0.01% group increasing their aggregate income share even while their share of the population remained stable. Individuals living in Quebec and Ontario, middle aged individuals (25 to 44 years, 45 to 64 years), and both single and married persons also substantially increased their share of aggregate income. None of the individuals or groups in the bottom 95% of incomes had changes in aggregate income as large as those observed for the higher income groups; no group in the bottom 95% experienced a doubling in their aggregate income.

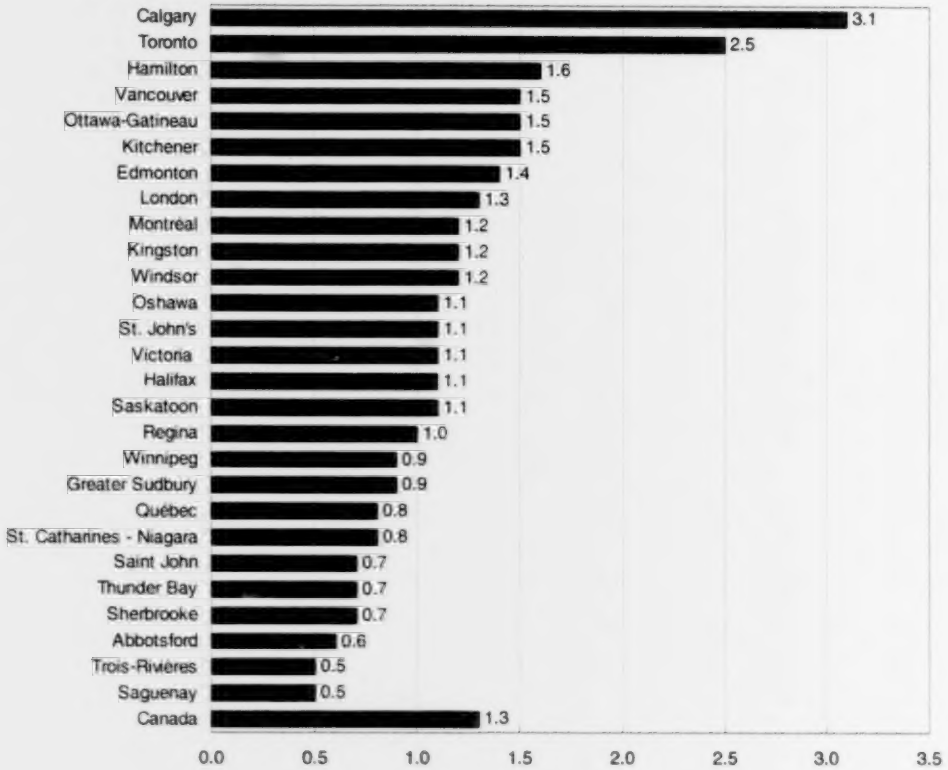
Where do they live?

The high income population is geographically distributed differently than the population at large. In 2004, only about one in every hundred (1.3%) Canadian family units had incomes over $250,000 (Figure 6)[12]. Of twenty-seven Canadian urban centres examined in 2004, fully 17 had at least 1.0% of their families having incomes of $250,000 or more. These include cities in relatively smaller provinces such as St. John's (1.1%), Halifax (1.1%), Saskatoon (1.1%) and Regina (1.0%) (Winnipeg and Sudbury were just below 1.0% with a proportion of 0.9%).

Two urban centres, Calgary (3.1%) and Toronto (2.5%) stand out as having much higher proportions of family units receiving over $250,000. Interestingly, the eight cities with proportions greater than or equal to the Canadian total were located in the provinces with the highest proportion of high-income individuals (Alberta, Ontario, Quebec and British Columbia). Nevertheless, based on representation within a city, it would seem that family units with especially high incomes (over $250,000) are relatively equally represented in cities across Canada.

12. Data for cities are calculated using a standard table from Small Area and Administrative Data Division at Statistics Canada. Total income in these two figures does not include capital gains whereas the other figures in this report include capital gains.

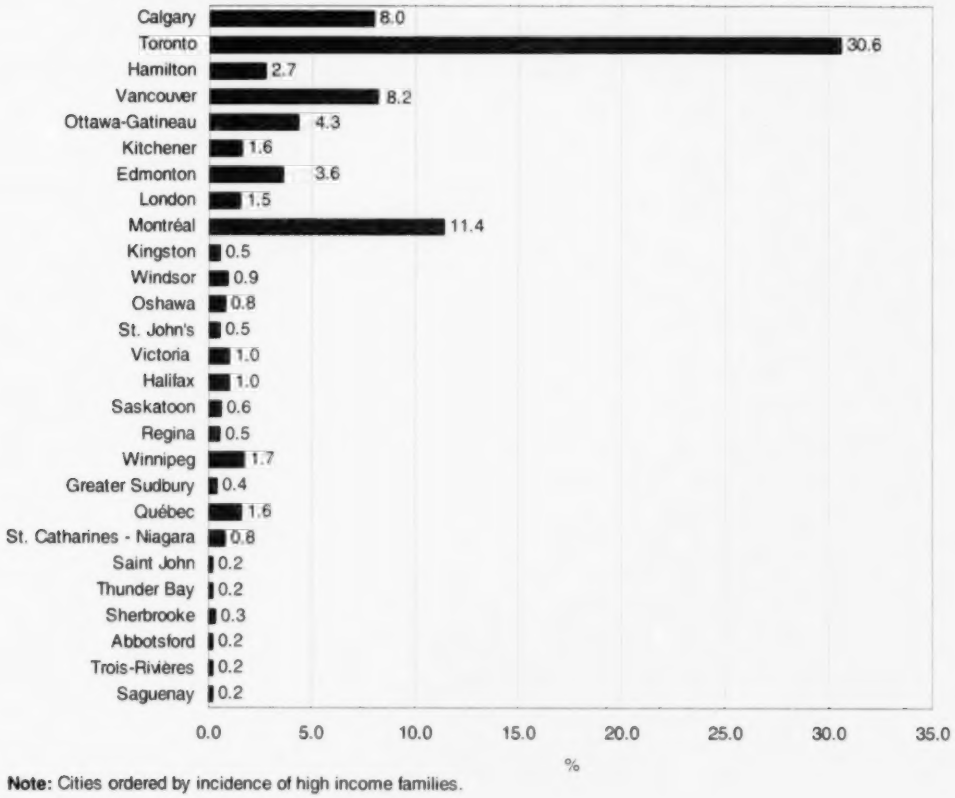
Figure 6 Proportion of families and persons not in families with total income over $250,000 by city, 2004



Source: Special tabulations, T1FF file.

While a distribution of families with incomes over $250,000 within cities is useful, we also need to take account of the distribution across the cities in Canada. Observing the distribution across cities (Figure 7) we find that almost one-third (30.6%) of all families with incomes over $250,000 live in Toronto, followed more distantly by Montreal (11.4%), Vancouver (8.2%), Calgary (8.0%), Ottawa-Gatineau (4.3%), Edmonton (3.6%), and Hamilton (2.7%). Over two-thirds (68.8%) of all family units with incomes over $250,000 in 2004, lived in one of these seven cities. This distribution and the provincial location of these urban centres, as observed above, mirror the distribution of individuals across the provinces in Table 7. Higher income families tend to be located in the larger Canadian urban centres.

Figure 7 Distribution of families and persons not in families with total income over $250,000 by city, 2004



Note: Cities ordered by incidence of high income families.

Source: Special tabulations, T1FF file.

The wealth of high income canadians

Economic well being is not solely a function of income, but also of wealth and consumption. In fact when examining inequality "consumption inequality is probably the better measure of inequality in well being or economic resources" (Crossley and Pendakur, 2006: 147). Given that both income and wealth are used to fund current consumption and together constitute economic well being, to what degree are high income Canadians also high wealth Canadians? For example, in terms of tax fairness, are the owners of expensive homes who pay high property taxes the same individuals who have high incomes and pay high income taxes?

The T1FF contains no information on stocks of assets or debts, but only the annual incomes, tax deductions and tax credits of tax filers. Statistics Canada's periodic Survey of Financial Security measures the incomes and net worth of Canadians and this analysis makes use of those data. The survey was most recently conducted in 2005 based on a sample of 9,000 dwellings. The previous study was conducted for 1999 and had 23,000

dwellings. Given the sparseness of high income families[13], we have used the 1999 SFS to ensure adequate sample size. The sampling techniques used in the Survey also help ensure a good response from high income neighbourhoods.[14]

Average income and net worth

Table 9 below shows average net worth[15] by total income quantile for 1999. For example, the average net worth for the bottom 80% of families was $192,000 while that of the top 1% of families was $1.9 million. As can be seen in the second column, the relationship between average income and average net worth is roughly steady at about 5:1 across the income distribution. The implication is that some low income families have relatively high net worth while some high income families have relatively low net worth.

Table 9 Composition of average net by total income quantile and asset/debt type, economic families, 1999

	Average net worth[1]	Average as a percentage of average net worth				
		Income	House	Cars	Other	Pensions
	thousands of dollars	percentage				
Bottom 80	192	20	27	4	37	32
Top 20	637	20	21	3	41	35
Top 10	822	20	20	2	44	34
Top 5	1,078	19	19	2	48	31
Top 1	1,962	19	15	2	61	23

1. 2004 constant dollars.

Source: Survey of Financial Security, 1999.

The four right-hand most columns of Table 9 provide relative averages for four individual components of net worth. The column labelled "House" is the value of principle and other residences less mortgage debt, the column "Cars" shows the relative asset value of vehicles less any vehicle loans and "Financial" refers to financial assets (credit cards, bank deposits, investments and business equity) less financial liabilities. Not surprisingly, the importance of housing and vehicular assets decline as income increases. While houses and cars accounted for 31% of average net worth for the 80% of families with the lowest total incomes, they only accounted for 16% of average net worth

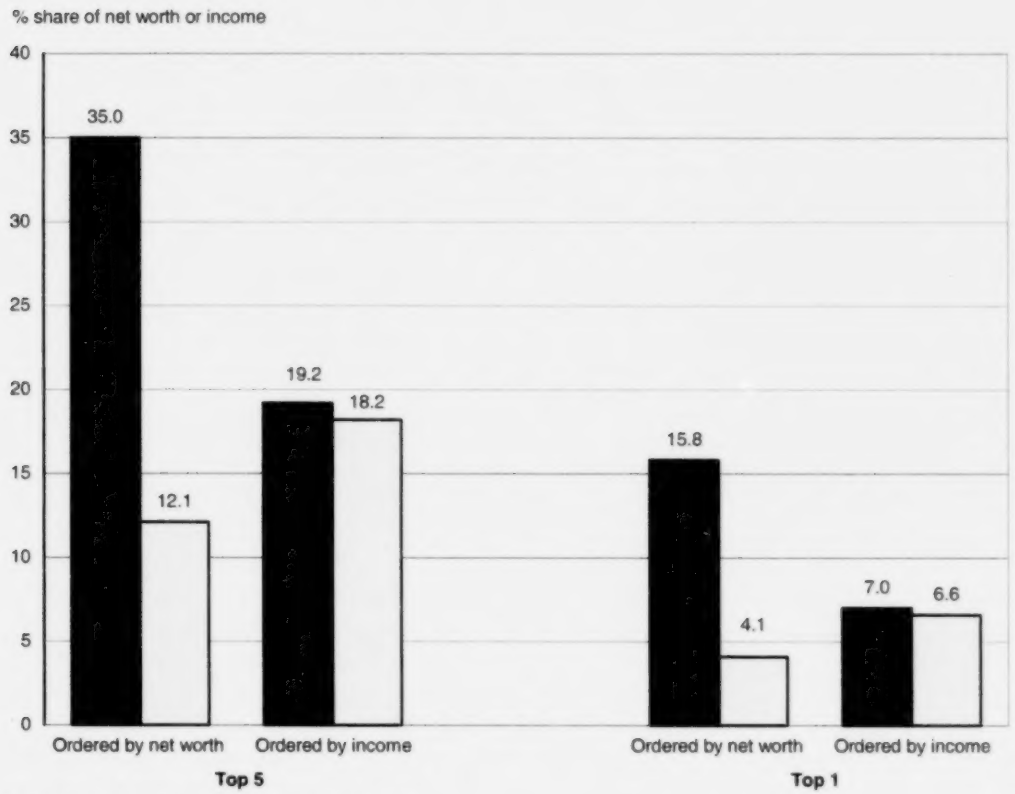
13. This study uses economic families when using the SFS. This refers to persons living together who are related by blood, marriage and adoption.
14. The SFS main sample, drawn from an area frame, consisted of approximately 21,000 dwellings. This area sample was a stratified, multi-stage sample selected from the Labour Force Survey (LFS) sampling frame. The second portion of the sample, approximately 2,000 households, was drawn from geographic areas in which a large proportion of households had what was defined as "high-income". This sample was included to improve the quality of the estimates of net worth, as higher-income family units hold a disproportionate share of net worth. For purposes of this sample, the income cut-off was total family income of at least $200,000 or investment income of at least $50,000. The latter was used to take into account those family units that may not have high income from employment but have substantial assets that generate investment income.
15. Net worth is defined as total assets less total debts.

for the top 1% of income earners. These top income families have greater financial net worth such that 61% of their net worth is financial compared to 37% for the bottom 80%. Pension assets[16] are far more evenly distributed by income with 21% of the net worth of the top 1% of families coming from pensions compared to 32% for the bottom 80%.

Concentration of income and net worth

As we have seen, the distribution of annual income is highly concentrated at the high end of the distribution. In addition, "it is well known that wealth-holding is highly concentrated, its distribution being much more unequal than that of annual income" (Davies, 1991). What does the distribution of wealth look like for Canadians with high annual income?

Figure 8 Distribution of net worth and total income of high income families and persons not in families by quantile group and ordering variable, economic units, 2004



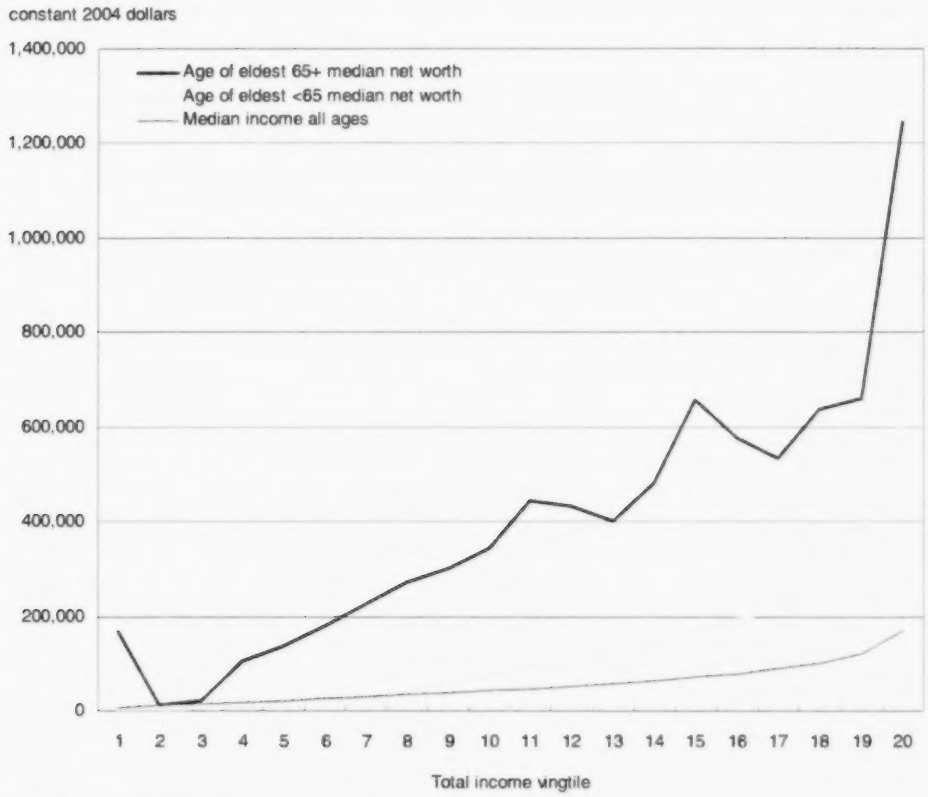
Source: Survey of Financial Security, master file, 1999.

16. The SFS definition of assets used here includes RRSPs, RRIFs as well as EPPs. EPPs are an estimate of the value of benefits accrued in employer (i.e. registered) pension plans. Although not an asset in the sense that it can be sold and used for another purpose, employer pension plan benefits are nonetheless an important part of the net worth of Canadians, as they provide many with at least a portion of their income in retirement. For many families, it is likely to be one of the largest assets.

Figure 8 presents the distribution of net worth and total income for the top 5% and top 1% of economic families and persons not in families. For each income group there are two sets of two bars. In the left-hand two columns for each income group families have been ordered by their net worth and in the right-hand two columns, families are ordered by income. Thus, the leftmost pair of columns indicates that the 5% of families with the highest net worth in 1999 owned 35.0% of all net worth in Canada but those same families earned only 12.1% of all income. The second set of columns indicates that 18.2% of total income is received by the 5% of families with the highest incomes and that those same families hold 19.2% of net worth. Therefore, the concentration of wealth in the top wealth vingtile (35.0%) is indeed almost twice the concentration of income in the top income vingtile (18.2%).

The top 1% of Families show similar trends but are somewhat more pronounced. The top 5% net worth share is 1.9 times the top 5% income share while the corresponding ratio is 2.4 times for the top 1% of families. This indicates that some of the very highest income earning families have lower net worth than many families further down in the income distribution. At first glance, it may seem odd that the share of wealth of high income families so closely follows their share of income. However, it must be kept in mind that wealth accumulation takes time and as such, life cycle effects and age must be taken into consideration. Figure 9 shows the median net worth for economic units by age of the eldest member and total income vingtiles.

Figure 9 Median net worth of economic units by age of eldest and total income vingtile, Canada, 1999



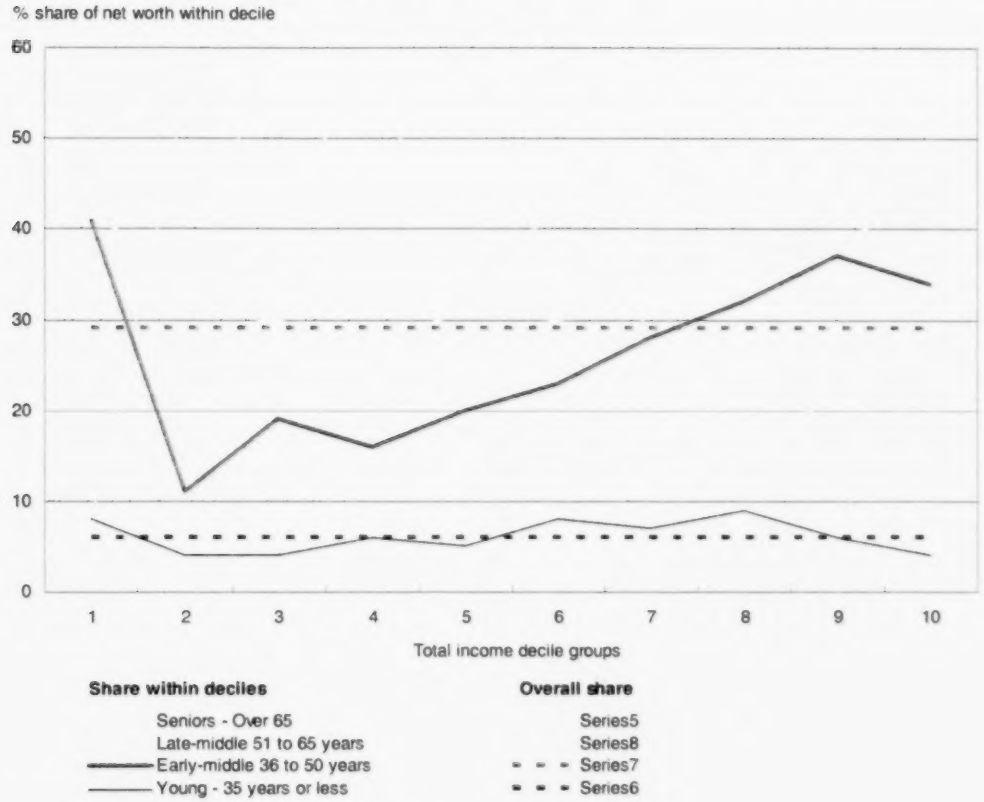
Source: Survey of Financial Security, master file, 1999.

The most predominant feature is that the elderly have a higher median net worth at all levels of income than do the non-elderly (Figure 9). The overall median for the elderly is $382,000, which is five times larger than the $74,000 for the non-elderly. In the first vingtile less than 2% are elderly and the higher median net worth is due to the fact that the younger units with low incomes have not had the time to accumulate high net worth. The gap quickly rises through the bottom half of the distribution to a point where elderly net worth is five or six times non-elderly. The gap then narrows again as the high income of younger units starts to provide wealth accumulation. The gap narrows to about 2:1 for the top few vingtiles. It is important to keep in mind that the portion of net worth due to principle residences represents a major portion of the tax base for property taxes, the primary wealth tax in Canada.

Figure 10 presents the share of total net worth by age of eldest and total income decile. Young are families with the age of eldest less than 36, early middle is 36-49, late middle from age 50-64 and elderly is age 65 and over. The light dashed lines show the overall shares for each age group. The late middle age group has the largest share of net worth at 37%. Both the early middle and elderly have a similar share at 29% and 28%

respectively leaving a 6% share of net worth for the young. However as can be seen these averages arise from a more complex story.

Figure 10 Net worth shares and overall share of economic units by age of eldest and total income decile, Canada, 1999



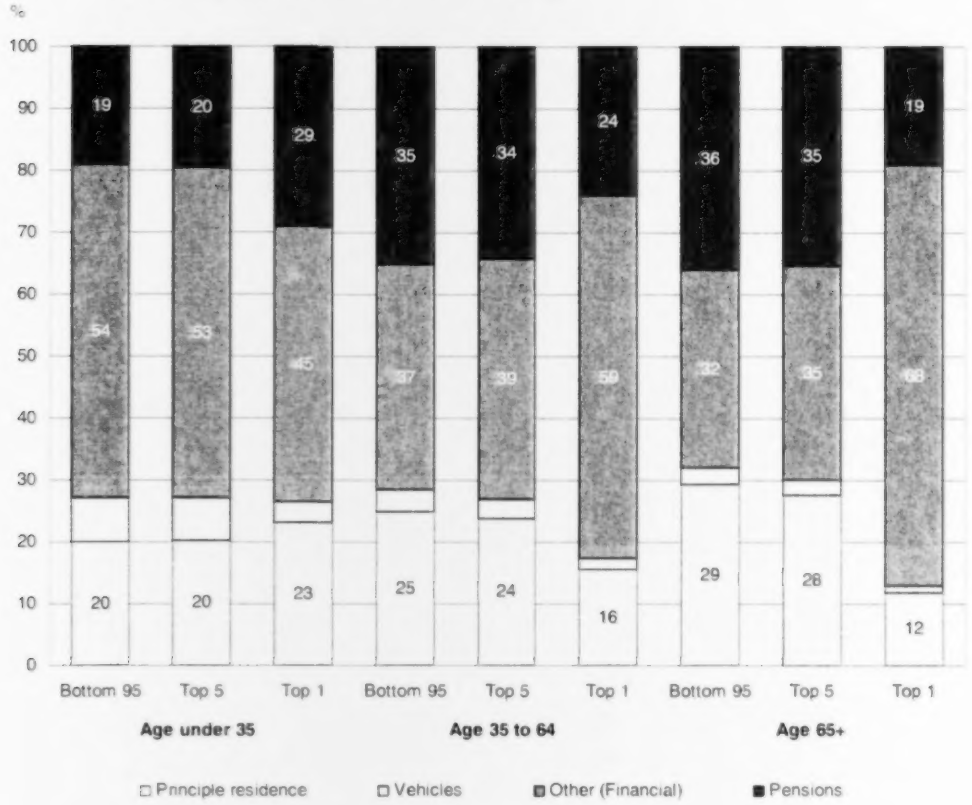
Source: Survey of Financial Security, master file, 1999.

The young have a less than 9% share of net worth throughout the income distribution while the middle aged population shares rise significantly with income throughout the distribution. The elderly shares peak in the lower half of the distribution and then drop steadily through the latter half of the distribution as the incomes of the elderly decline and people retire from the labour market. Thus a significant portion of the wealth of the elderly is concentrated in the lower half of the income distribution. The composition of that wealth has implications for the equity of property taxation.

Figure 11 shows the composition of net worth by source, age of eldest and income quantile. The very high income elderly receive a smaller proportion of their net worth from principle residence and pensions than do the younger very high income units. The very high income elderly also have a significantly larger share of net worth due to financial assets and debts than do the non-elderly. Fully 68% of elderly high income families' net worth is from financial assets, almost double the 35% proportion in the top

5%. The families in the top 5% of income earners who are elderly account for 0.5% of all families and 2% of all principle residence net worth but they account for 5% of total financial net worth.

Figure 11 Net worth shares by age of eldest family member and total income quantile, economic units, Canada, 1999



Source: Survey of Financial Security, master file, 1999.

Young high income families have twice the share in housing than do elderly high incomes indicating the early saving behaviour in pensions and housing (Figure 11). Pension shares increase with age but in the top 1 of eldest family members they remain a small percentage (12%) due to the high amounts of financial net worth.

While the distribution of net worth tends to be more concentrated than income, at the high end, net worth is no more concentrated than income at the upper end of the income distribution. In other words, the highest income Canadians are not necessarily the Canadians with the highest wealth. The composition of net worth is quite different for the top 1% of families than the top 5% with close to two-thirds coming from financial net worth. The top 5 more closely resemble the bottom 95 than the top 1% in this regard. Elderly families have the highest median net worth at all levels of income yet their shares

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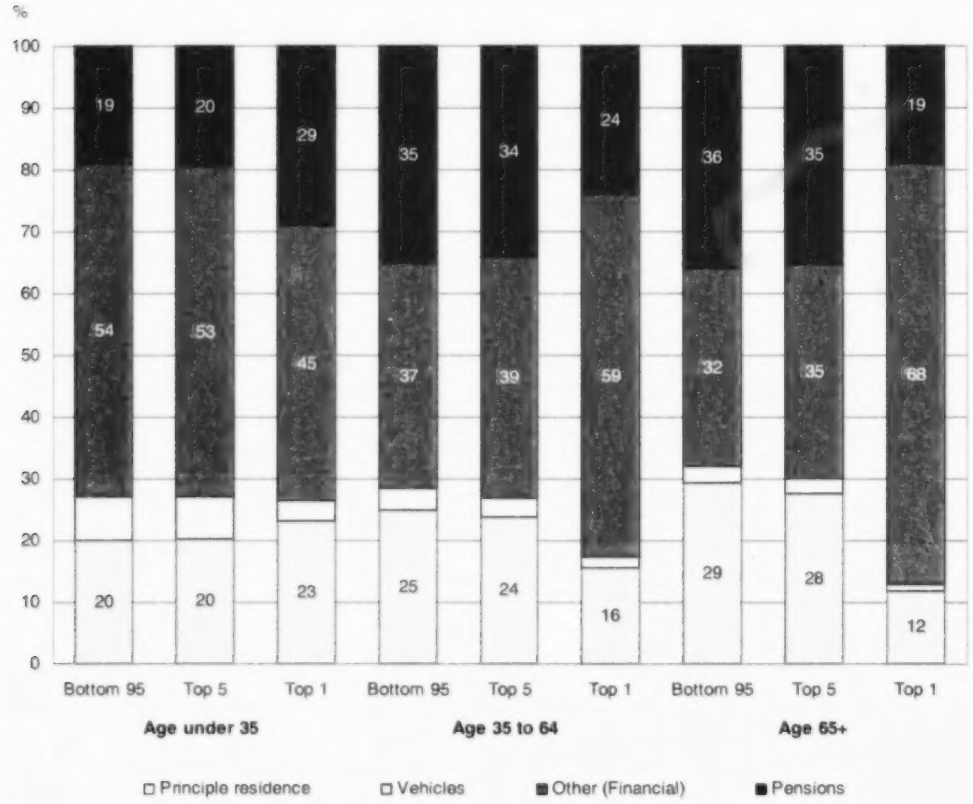

Source: Survey of Financial Security, master file, 1999.

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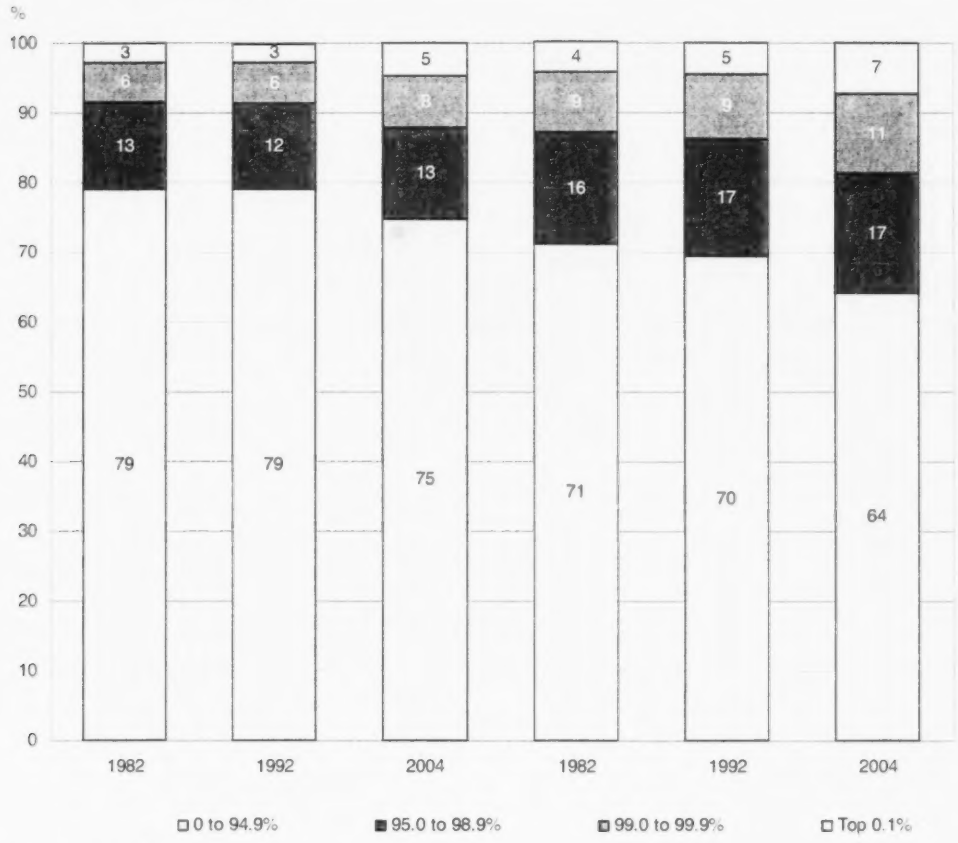
of population and net worth remain concentrated in the lower half of the distribution of income.

What taxes do they pay?[17]

To lead us into the section on taxes, Figure 12 presents the percentage shares of income and taxes for the four income groups. The shares are calculated as the ratio of total income or taxes for each income group to total income or taxes for all Canadians. Total tax includes federal plus provincial taxes, including the repayment of OAS and Family Allowances, plus payroll taxes. Total income is income as reported on tax forms using *total* capital gains and dividend income plus the child tax credit and sales tax credit.[18] In 2004, the bottom 95 percent of the tax filer population received 75 percent of the income and paid 64 percent of the taxes while the top 5 percent of tax filers received the remaining 25 percent of all income and paid 36 percent of all taxes. Note that the ratio of taxes to total income steadily rises with higher income groups.

17. There is an important caveat to this analysis of taxes paid. An unknown number of high income individuals and family units have business income that is received via a corporation, and may have investments held in corporations, trusts, and charitable foundations. These vehicles are used, for example, in tax planning such as so-called estate freezes and for income splitting. These kinds of sophisticated tax planning are not considered in this analysis due to data limitations.
18. The Revenue Canada Taxation Statistics publication presents taxable capital gains and taxable dividend income. These components of income have been adjusted to represent total income from these sources.

Figure 12 Shares of individual income and taxes by income quantile, Canada, 1982, 1992 and 2004

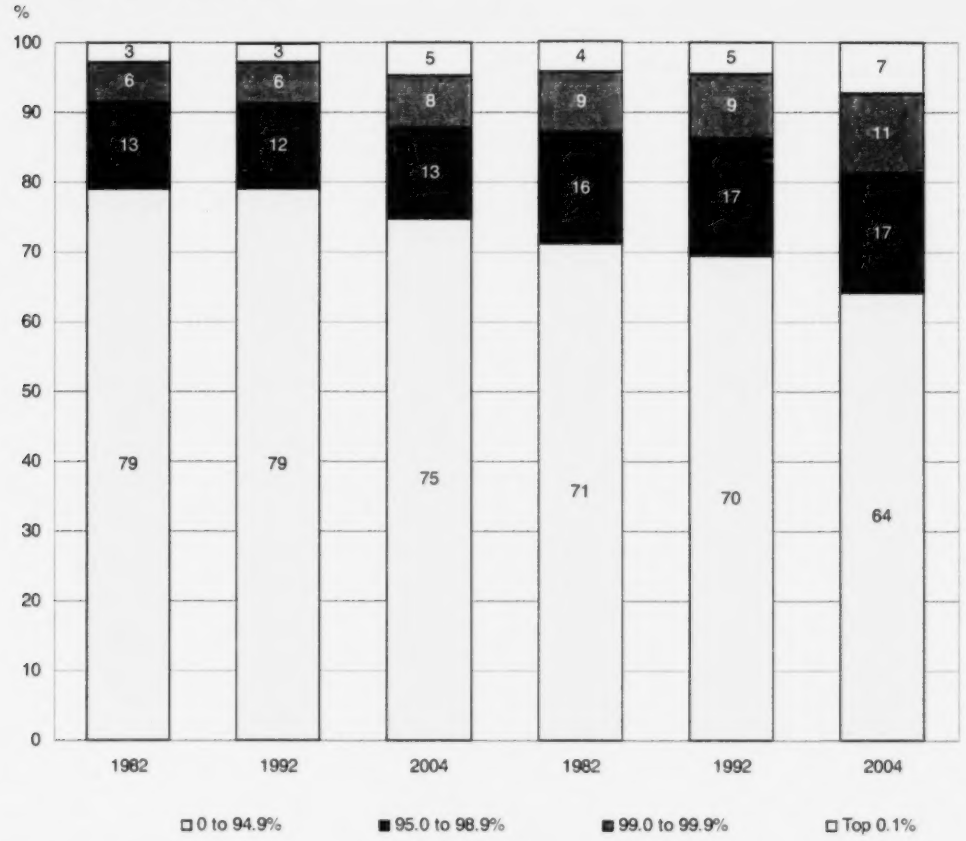


Source: Special tabulations, T1FF file.

Tax rates are an important indicator of the fairness of a tax system. Tax rates in relation to income are a good measure of the vertical equity of the system where a basic principle of Canada's system is taxation according to the ability to pay. This principle is generally interpreted to mean that those with higher incomes should face higher tax rates. However, the tax system is not only used as a tool for achieving vertical equity. Fairness, or equity, also means that people in similar circumstances should be taxed in a similar way (horizontal equity). The tax system is also asked to meet other goals, such as simplicity, efficiency, revenue generation, and the granting of various concessions and incentives referred to as tax expenditures. These goals are often competing and the political process determines the appropriate balance.

There are a number of different tax rates that can be examined. *Nominal* tax rates are the rates provided in legislation. The statutory federal personal income tax rates of 0.16, 0.22, 0.26 and 0.29 (2004) are one example. A *marginal* tax rate is the rate at which additional income would be taxed (i.e. how much tax is payable on an additional dollar of income). These rates are sensitive to the kind of additional income and the unit of

Figure 12 Shares of individual income and taxes by income quantile, Canada, 1982, 1992 and 2004



Source: Special tabulations, T1FF file.

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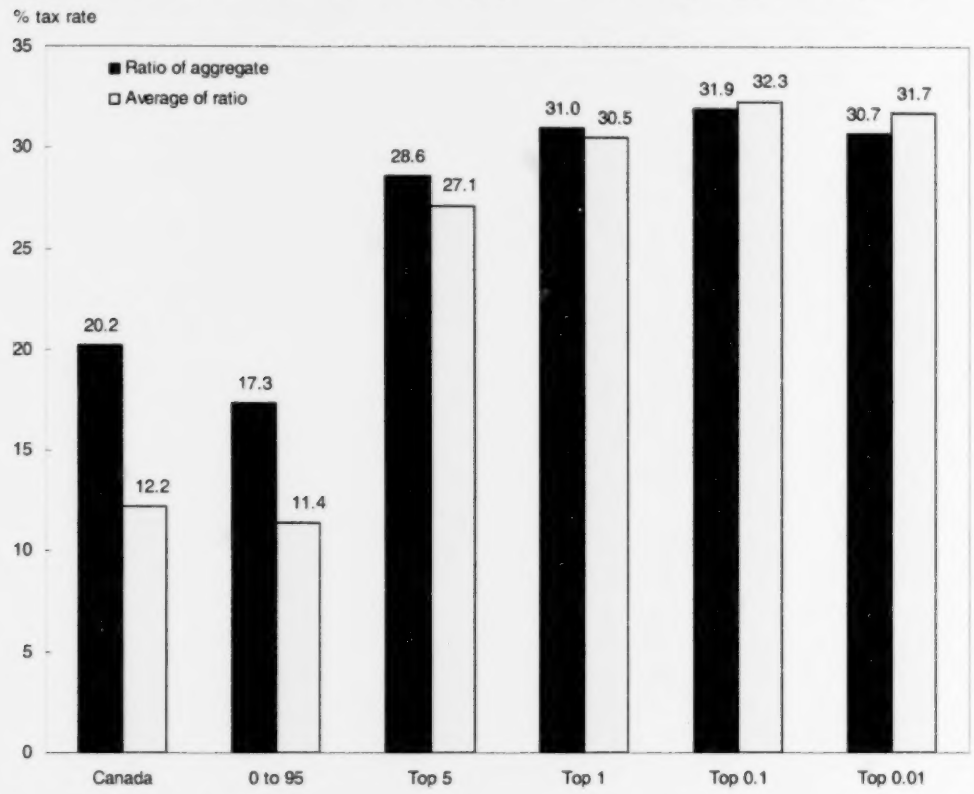
analysis (i.e. individual or family) as we shall see later. Effective tax rates are what we will be focusing on in this section of the analysis. They are calculated as the ratio of the taxes actually paid to the total income of an individual or group.

Figure 13 Individual income tax rates by quantile income group, Canada, 2004



Source: Special tabulations, T1FF file.

Figure 12 roughly indicates the general progressive nature of the personal income tax system. However, this is shown more directly in Figure 13. There are six sets of bars, one for each quantile income group, and one for all filers. The heights of the bars indicate the effective tax rate or ETR (the proportion of total income paid in taxes). Tax rates are clearly higher in the higher income groups.

The two bars show two different ways in which ETRs may be calculated, and, as can be seen, with somewhat different results. The first of the two bars is calculated using the more common approach of dividing *total taxes* paid by all filers in the group by their corresponding *total income*. Thus, according to this method 20.2 percent of all income for the population is paid out in taxes (Figure 13). The second bar is calculated by computing each individual filer's ratio of taxes to total income, and then averaging these

individual ETRs[19]. This gives the average ETR across individuals and results in lower effective tax rates. For example, on average tax filers paid 12.2 percent of their income to taxes. The key difference is that in the first case the effective tax rate is weighted by income and in the second case by population. This can be seen by the convergence of the two methods as income increases and the group size declines. We shall use the latter method in the rest of the analysis. Either way, however, Figure 13 shows a generally progressive structure of effective Canadian tax rates. From 11.4 percent the rates climb to 27.1 percent, 30.5 percent, 32.3 percent, and for the highest income group they drop marginally to 31.7 percent.

The ETRs in Figure 13 may still seem low, averaging well under 20 percent overall and about 28 percent for the top 5 group, especially when compared to the top statutory tax rate of 46% in Ontario in 1995. It is critical, however, to keep in mind the difference between average and statutory marginal tax rates. ETRs are always lower because the income in the denominator has been taxed at a mixture of statutory marginal rates, including an initial tax bracket, corresponding to personal tax credits, where the rate is essentially zero.

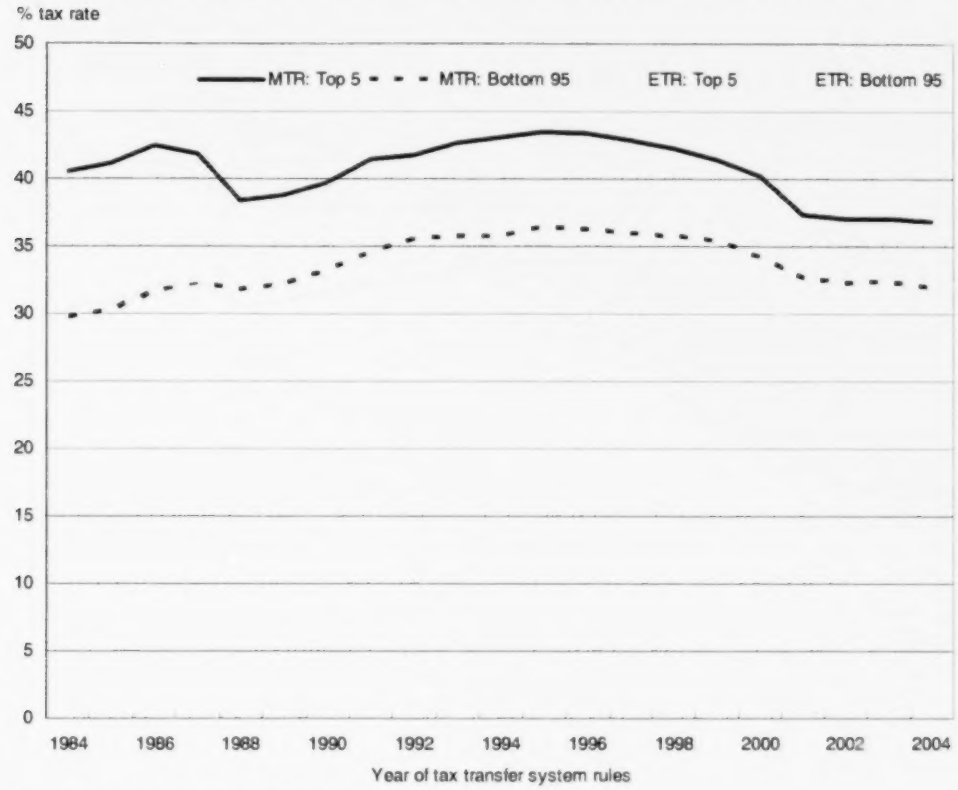
In order to highlight the distinction between marginal and average rates, Figure 14 compares average effective tax rates with average effective marginal rates using the Social Policy Simulation Database and Model (Bordt et al 1990). The tax and transfer system rules, rates and levels from each of the twenty years 1984 to 2004 were applied to fixed populations of individual tax filers, and the results were split into two income groups – the bottom 95 percent and the top 5 percent.[20] The simulated average effective tax rates (labelled "ETR" in the graph) are at roughly the same levels as calculated using the T1FF data.

For the bottom 95 the ETR rates generally increased through the 1980s, remained roughly constant at just over 15% throughout the 1990s, and declined at the turn of the new millennium and have been steady through 2004 (Figure 14). There has been more fluctuation in the high income population due to numerous changes to top federal tax brackets and to high income surtaxes. They had a more pronounced rise in the mid to late 1980s, and declined more sharply in 1988 with the introduction of tax reform and the reduction of 10 brackets to 3 and the conversion of deductions to tax credits (Figure 14).

19. Some taxfilers report a negative total income and others report taxes that exceed income, in some cases due to multi-year reporting. To control for the impact of such outliers, the effective tax rates were bounded between 0% and 100%.

20. The methodology employed shows the impact on tax rates of the changes to the tax system independent of business cycles and demographic change.

Figure 14 Marginal effective tax rates of individuals by source of income and income quantile and effective tax rate, SPSD/M V14.0/8.0, Canada



Source: Special tabulation, SPSD/M V14.0 and V8.0.

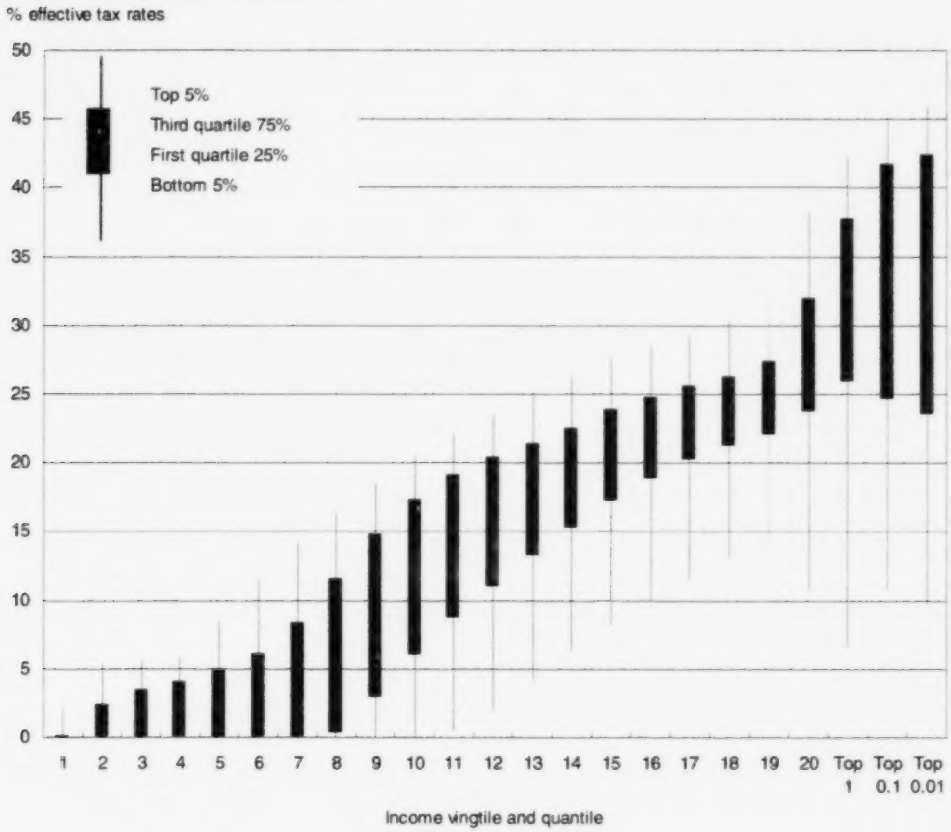
The effective "marginal" tax rates (EMTR), in contrast, have been estimated by simulating the incremental tax liability each individual would have faced if their earnings had been increased by a small amount (Figure 14). The resulting marginal tax rates were then averaged across all filers within each income group. They are consistently at least fifteen percentage points higher than the effective rates for the bottom 95.[21] For the high income Canadians, the gap is naturally smaller at about 5%-10% as a greater proportion of income is subject to the top marginal rate. This gap has been shrinking as a result of the two major tax reforms of 1998 and 2000-2001.

While the progressive structure of statutory income tax rates causes simulated marginal tax rates to rise with income, there is also significant variability of tax rates within a given income range. Figure 15 below presents ETR percentiles by income. The horizontal axis divides individual filers into 20 equally sized vingtiles and also has the top three high income groups. For each vingtile the box and whisker shows the 5th, 25th,

21. They are slightly lower than maximum combined federal plus provincial statutory rates in the tax system because they have been averaged across filers with different levels of income and deductions.

75th, and 95th percentiles for the ETR on the vertical axis. For example, in the 13th vingtile we observe that the bottom 5% of individual filers had an ETR less than about 5% while the top 5% of individuals had an ETR of greater than approximately 25%.

Figure 15 Effective tax rates by individual total income vingtile and selected quantiles, Canada, 2004



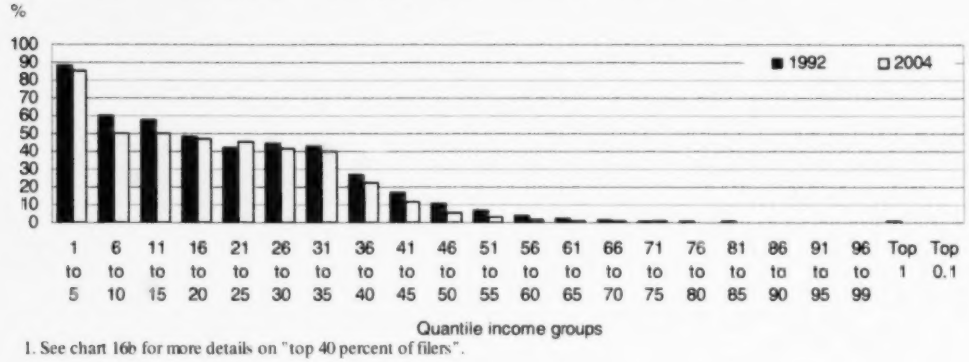
Source: Special tabulations, T1FF file.

The group with the largest range is the top 0.01 where 90% of filers experience an ETR of between 9% and 46%, a spread of 37%. The filers in the 19th vingtile have the smallest spread of 18% ranging from 14%-32%. This narrower range of ETRs indicates a more homogeneous use of deductions and credits than any other income group among the top 60% of filers. Note that fully 5% of individuals with incomes in excess of $2.8 million (Top 0.01) paid effective tax rates of less than 10% due to the use of deductions and credits.

Figure 16a below shows the proportion of filers paying zero taxes by income. Over 85% of the 5% of Canadians with the lowest incomes in 2004, paid zero income and payroll taxes. While no income taxes are payable at these levels of income, EI and CPP

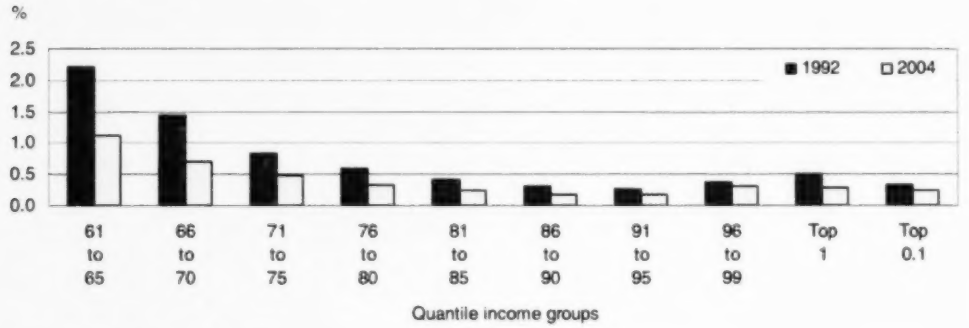
contributions can be paid. The proportion paying zero taxes drops sharply after the first vingtile but remains over 40% until the 35th percentile. It then drops quickly to below 1% approximately two-thirds of the way up the income distribution.

Figure 16a Individual tax filers paying zero taxes, 1992 and 2004



1. See chart 16b for more details on "top 40 percent of filers".

Figure 16b Individual tax filers paying zero taxes, top 40 percent of filers, 1992 and 2004



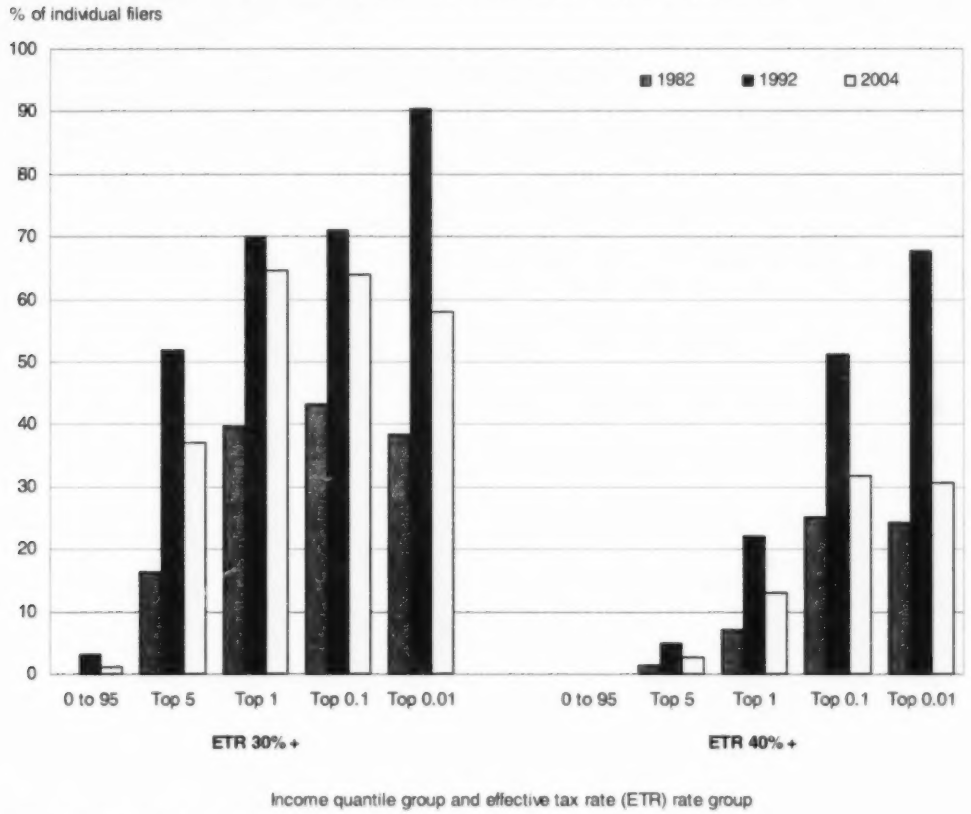
Source: Special tabulations, T1FF file.

Figure 16b presents a zoom-in on the upper tail of Figure 16a. Here we can see a small increase in the proportion of filers paying no taxes beginning with the top 5% of filers. The proportion of filers paying no tax remains below one-half of one percent and for the very highest income group about 100 filers had paid no taxes. The use of tax deductions such as business losses and gifts to the crown are responsible for a number of these situations. It can also be seen clearly that the number of filers reporting zero taxes has declined at almost all income levels between 1992 and 2004.

Only a very few high income Canadians reduce their taxes to zero, far more pay relatively high ETRs. Figure 17 shows the proportion of filers by income quantile and ETR groups. The five leftmost groups of columns show the proportion of filers with ETRs of 30% or more. In 2004 2.9% of all individual filers experienced ETRs in excess of 30%. Only 1.1% of non-high income filers had ETRs greater than 30% compared to 36.9% of high income Canadians. For the higher income groups this proportion rises to

around 58-65%. The right hand set of columns in Figure 17 present the proportion with ETRs over 40%, which interestingly is the same range that the EMTR falls into in 2004. While the overall proportion of high income Canadians (5% and over) in this range drops to 2.7%, almost one-third of the top 0.01% of filers have ETRs over 40%. These filers expose enough income to the top marginal rate essentially to bring their average rate close to the marginal rate.

Figure 17 Proportion of individual tax filers in higher effective tax rate (ETR) ranges by income quantile, Canada, 1982, 1992, and 2004



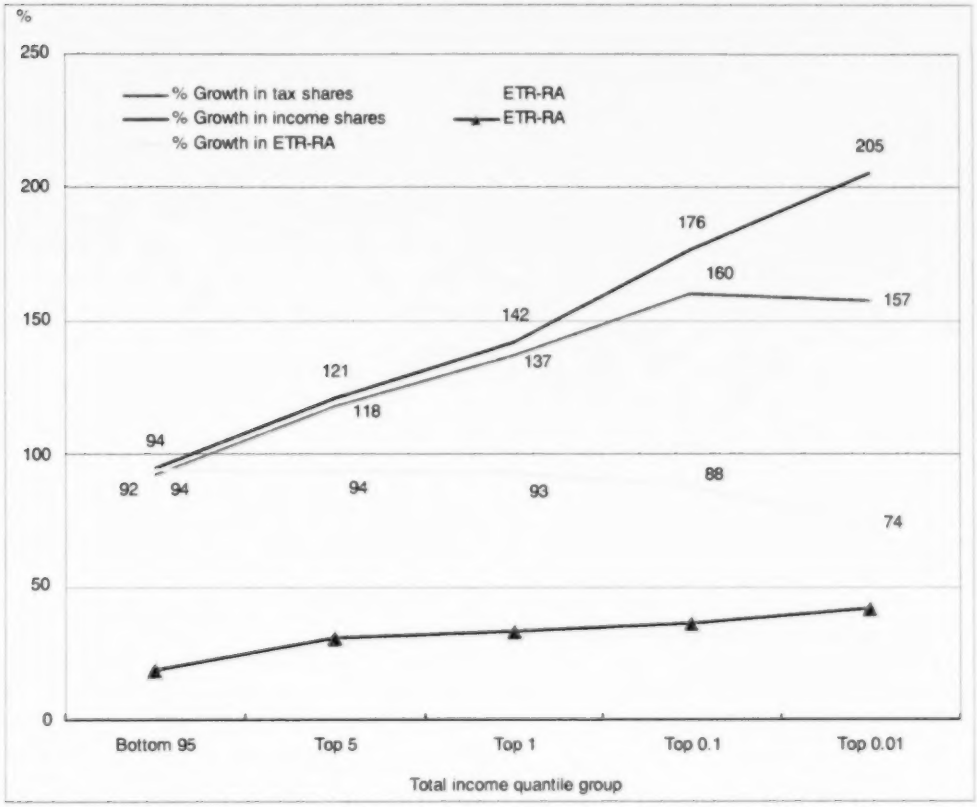
Source: Special tabulations, T1FF file.

ETRs are determined by the interplay of the distribution of income by source and the structure of the tax transfer system, and both of these changed between 1992 and 2004. During that period, the share of income of the top 5% increased from 19.9% to 24.1%, while at the same time tax rates fell, especially due to the reforms of 2000-2001.[22] The bottom two curves in Figure 18 show the ETRs (ratios of aggregates) for 1992 and 2004 by income. It can be seen that the 2004 ETRs are slightly lower than 1992 for the all

22. The level at which the highest federal tax rate starts to be paid increased to $100,000 from $60,000 and the lowest rate, dropped from 17% to 16%. Provincial governments moved to a tax on taxable income with their own rate schedules.

income groups shown. However, for the top 0.01 percent of individuals the mean tax rate dropped 10.8 percentage points from 41.5% to 30.7% over the period, a drop of 25%.

Figure 18 Percentage change in individual effective tax rates (ETR), income shares, and tax shares (1992 to 2004), and ETRs for 1992 and 2004, Canada



Source: Special tabulations, T1FF file.

The upper three curves in Figure 18 show the percentage difference between 1992 and 2004 for income, taxes, and ETRs. So for example, the top 0.01 mean ETR in 2004 was 74% of the 1992 ETR. Overall, the share of incomes going to the top 5% of Canadians increased 21% from 1992 to 2004. Meanwhile their tax rate dropped from 30.5 to 28.6, a six percent reduction, while at the same time their share of total taxes increased by 18% from 30.5% to 35.8%. The differences were larger for the highest income group (top 0.01) which witnessed a 26% drop in the effective tax rate between 1992 and 2004, and a 57% increase in the share of taxes paid over the same period. In other words, even though nominal and effective tax rates have declined, the growth in the aggregate amount of income exposed to the top rate has increased sufficiently to offset the lower effective tax rate and result in an overall rise in the share of government revenues from high income Canadians.

Conclusions

This paper has used income tax data to characterize high income Canadians. High income Canadians are relatively less often studied than those with low income.

Unlike the study of poverty, based as it often is on a low income threshold, there is no agreed high-income line for Canada, nor is there an extensive research literature on which to base the choice of a threshold defining those with "high income". The implicit level from government tax policy – the beginning of the top marginal rate bracket – suggests around $70,000-100,000. An examination of the income distribution shows that 5% of Canadians have incomes in excess of $89,000 in 2004.

Whichever of a number of thresholds are chosen, the incomes in the upper tail of the distribution increased substantially from 1992 to 2004. In contrast, as a group, individuals in the bottom half to 80 percent of the distribution generally saw little improvement in their constant dollar incomes.

High income Canadians are predominantly middle-aged married men. In 2004 high income Canadians were even more concentrated in the middle age groups, had a higher percentage of males but a lower percentage of them were married. These trends tend to mirror the demographic progression of the baby boom, with higher divorce and lower marriage rates. Women have made noticeable gains in their representation in the top 5% of filers but these gains did not extend to the top 0.01% of filers. The majority of high income Canadians in 2004 lived in large cities in Ontario and Alberta.

When compared to the USA, there were fewer high income Canadians in 2004, and their incomes were considerably less than those received by correspondingly defined high income Americans. High income Canadians increasingly receive more of their income from employment than from other sources, supporting the findings of Saez and Veall (2003); while investment income has been a decreasing proportion of their total income, even amongst those with the highest incomes.

This analysis also examined the relationship between wealth and income for high income Canadians. The distribution of net worth is significantly more concentrated than income. However, for high income earners their share of wealth is no larger than their share of income. At all ages, but particularly amongst the elderly, the wealth of those with the highest incomes takes the form of investments.

In line with their increasing share of total income, high income Canadians have been paying an increasing share of total income taxes. As well, tax rates are clearly higher in the higher income groups, reflecting the progressive nature of the tax system. The effective rate of taxes (actual taxes paid divided by income) varies quite widely across the income distribution but is particularly heterogeneous among those with the highest incomes. Many of the highest income Canadians in the top 0.01 percent of the distribution face ETRs over 45%, while some pay at an effective rate as low as 10%. Interestingly, the proportion of all tax filers who pay zero taxes has decreased over the

period from 1992 to 2004. The growth in income from 1992 to 2004 was greater the higher one goes up the income distribution. So too was the growth in taxes paid by high income Canadians. However, overall effective tax rates at high incomes declined, more so among those with the very highest incomes.

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